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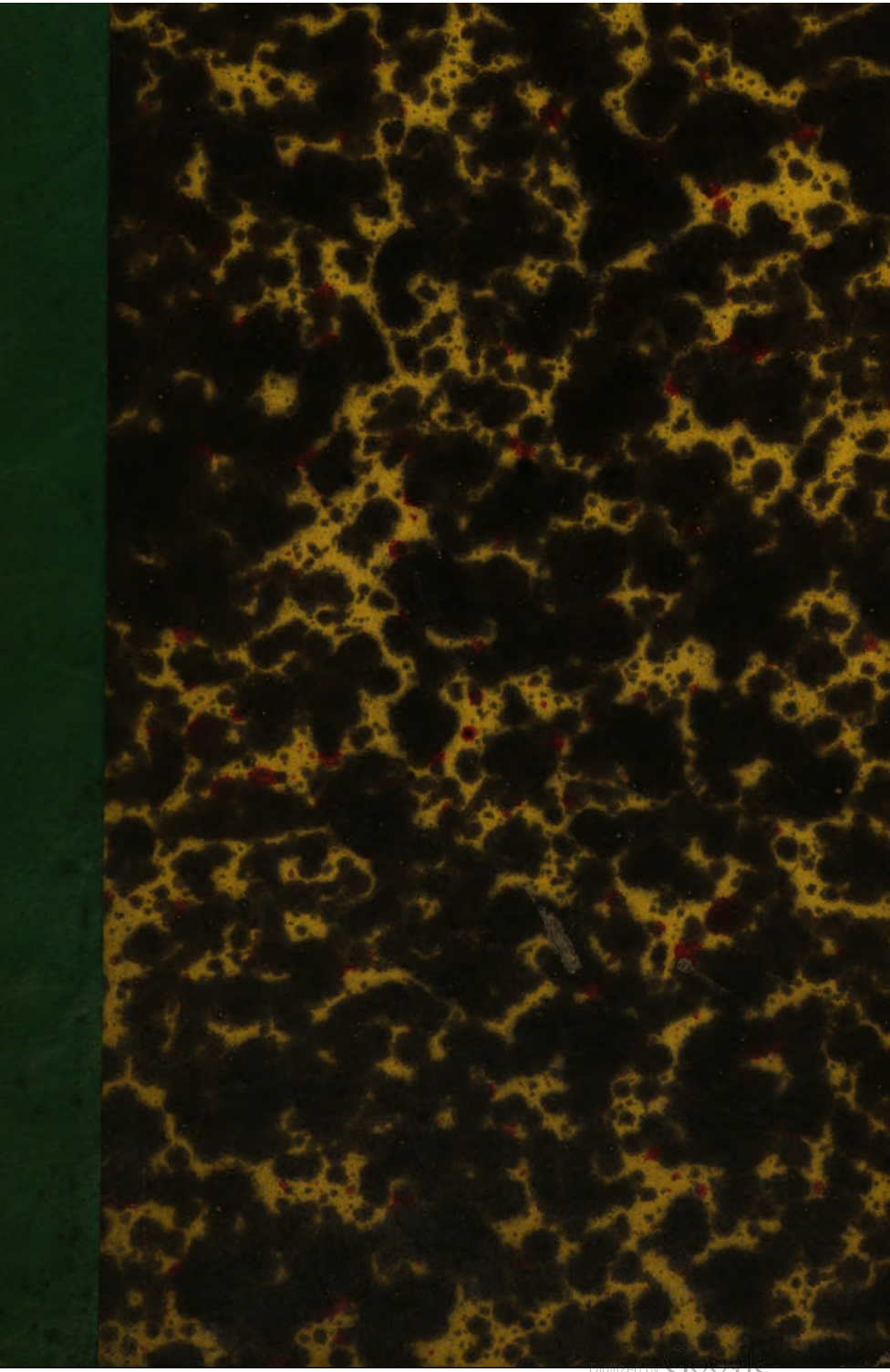
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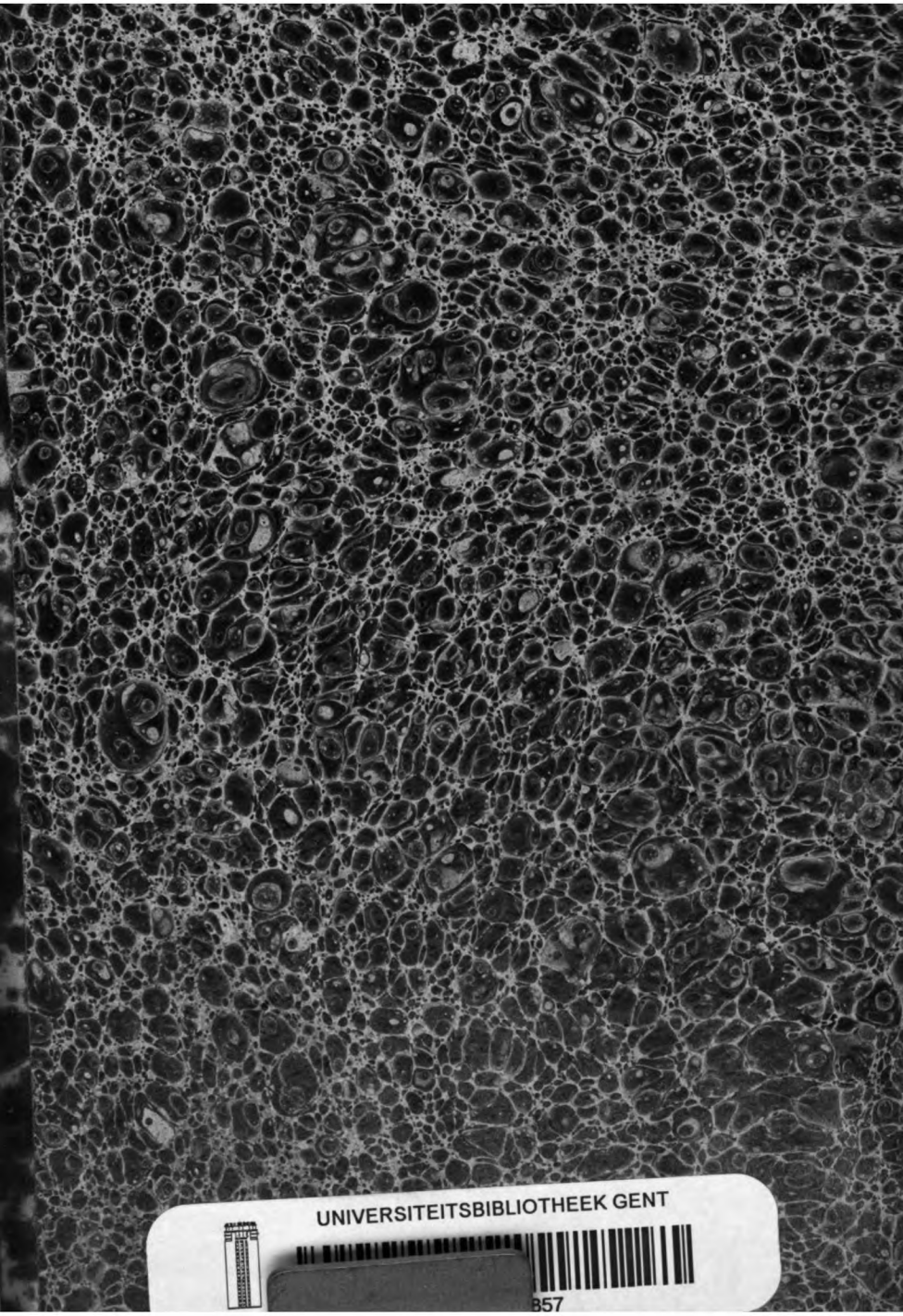
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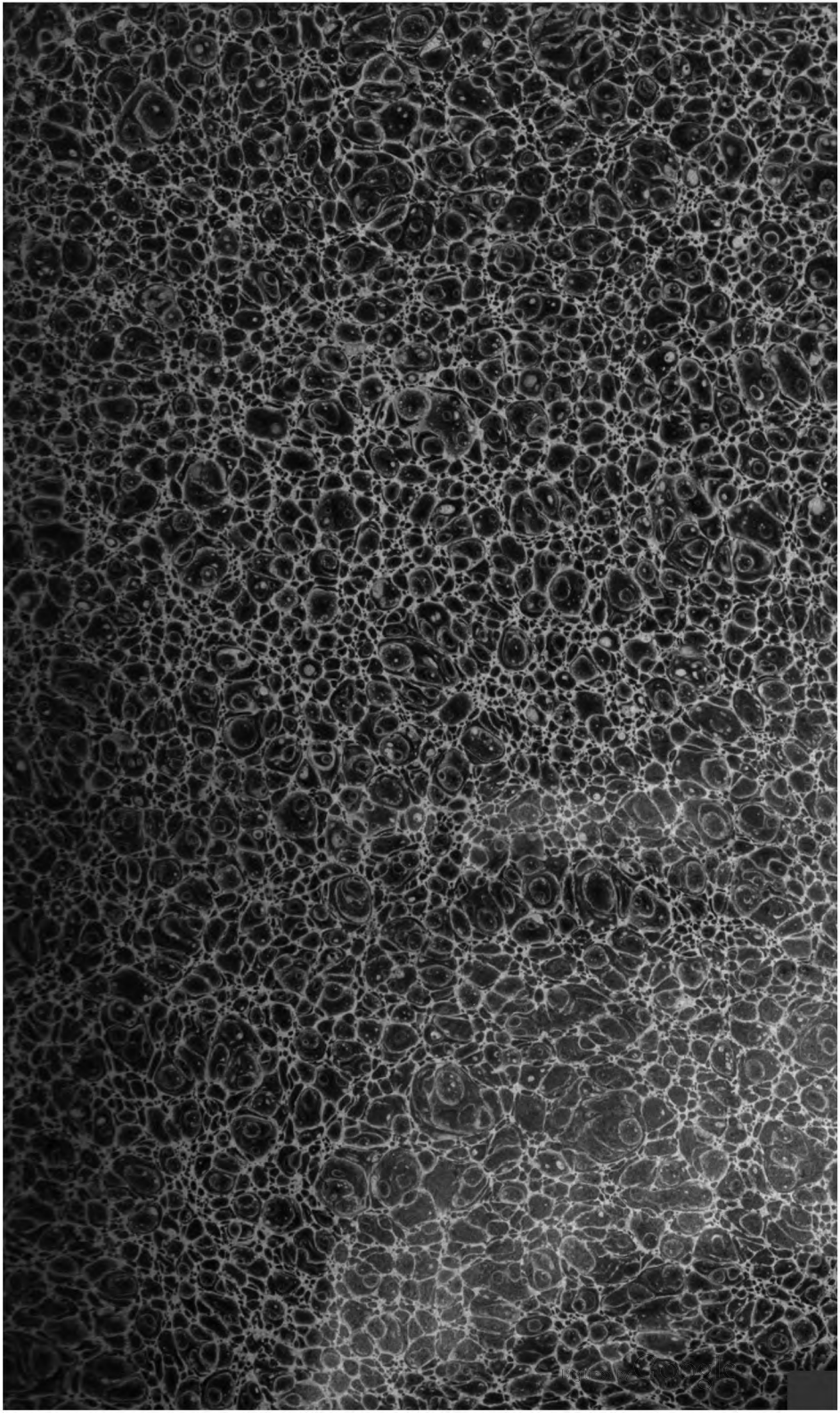

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By JAMES JOHNSON, M.D.

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AND

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THE

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No. LI.

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OCTOBER 1, 1836, to JANUARY 1, 1837.

THE NATURE AND TREATMENT OF DROPSY; CONSIDERED ESPECIALLY IN REFERENCE TO THE DISEASES OF THE INTERNAL ORGANS OF THE BODY WHICH MOST COMMONLY PRODUCE IT. Parts 1 and 2—ANASARCA and ASCITES. To which is added an Appendix, containing a Translation of the Work of Dr. Geromini, on Dropsy, from the original Italian. By *Edward J. Seymour*, M.D. Physician to St. George's Hospital, Consulting Physician to the Seaman's Hospital, and one of the Physicians in Ordinary to H.R.H. the Duke of Sussex. Octavo, pp. 218. London, 1837.

THOSE who have the pleasure of an acquaintance with Dr. Seymour know that he is a physician of experience, of observation, and of that practical turn of mind, which ensures his not wasting either observation or experience on subtle and useless hypotheses. These considerations might lead us to anticipate, that a work on Dropsy from his hands would be one of an interesting, because a practical character, and such anticipations have been amply realized by a careful perusal of the work.

The frequency of those organic lesions which are attended with one form or other of dropsy—the necessity of discriminating the effect from the cause, and the varieties of that effect from each other—the prevalence of the error, which originated in the want of a knowledge of morbid anatomy, the error of commonly erecting dropsy into a substantive disease—and the general deficiency of accurate ideas of the nature of the disorder, and of definitive principles of treatment, induce us to seize the present opportunity of laying a full analysis of this work before our readers. We are mistaken if they do not find it of considerable utility.

The first part is devoted to the investigation of anasarca, or dropsy of the skin. It contains five chapters. The first chapter is on anasarca in general—the second, on anasarca from rheumatic disease of the heart—the third on anasarca from enlargement of the heart—the fourth, on anasarca occurring independently of organic disease of an internal organ—the fifth, on anasarca from disease of the kidneys.

The second part is appropriated to ascites, or dropsy of the abdomen. It treats of it as it arises from contraction of the liver, or from diseases of the

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viscera supervening upon ague. The last form of ascites discussed, is that which depends on disease of the peritoneum.

Of the appendix we need say nothing at present, but proceed to analyse the observations of Dr. Seymour on the subjects we have enumerated.

ANASARCA, OR DROPSY OF THE SKIN.

Dr. Seymour observes, with justice, that probably there is no disease on which pathological anatomy has thrown more light than upon dropsy. It is, indeed, one of those complaints to which we may triumphantly point, when asked what morbid anatomy has done. Dropsy is no longer, by scientific physicians, regarded as, in the majority of cases, a substantive disease, but rather as a symptom of organic alteration of one or more of the viscera. In most instances, it arises from the return of blood to the right side of the heart being obstructed, and from the impaired functions of that organ being relieved by the secretion of large quantities of fluid; the effusion being partial where the obstruction is partial, but where the obstruction is in the heart itself, sooner or later extending through the whole cellular texture.

To exhibit the several efficient causes of anasarca, our author graphically describes four cases—suppositious in form, but in reality the representatives of large classes of facts.

1. "A patient, between twenty and thirty, or younger, applies for relief, having difficulty of breathing, increased on ascending a stair, or on rapid motion, with constant palpitation of the heart: he will relate that he has suffered from this palpitation for several years, on any hurry, but that latterly it has become constant; that he lies down in bed with difficulty,* and that latterly his ankles and legs have begun to swell; he has constant thirst; the urine is high-coloured; there is short dry cough, though he can inspire freely; his nights are restless; and when he wakes, his eyelids and cheeks are swollen: the pulse may be either quick and weak, or full and soft—rarely hard; the urine, on examination, does not coagulate by the admixture of acids, or by heat." 3.

On close inquiry, we find that at some former period (it may be remote) the patient has suffered from acute rheumatism, the articular inflammation having shewn a disposition to shift its seat, and having left more or less of palpitation behind it. The swelling has probably recently appeared. There is usually a bruit in the cardiac sounds, and much action is perceived in the vessels of the neck.

The cause of the disease is enlargement of the heart, from adhesions of the pericardium, and the dropsy is the effect of the difficulty of the circulation.

2. A man, generally under fifty years of age, is received into a hospital. He is enormously swollen: the face, hands, legs, and integuments of the abdomen hard, but retaining the impression of the finger; there is considerable difficulty of breathing, and hard dry cough; sometimes a little expectoration, frothy and tinged with blood; the urine is scanty, and does not

* "This symptom is not constant."

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coagulate by the usual methods; the pulse is hard, sometimes full; the heart is felt beating over a large surface; the tongue is often foul. Such symptoms, Dr. Seymour assures us, depend on hypertrophy and dilatation of the heart, from hard living, and especially from porter drinking.

3. A woman, between 40 and 50, also applies for relief, with inordinate swelling of the whole body; but here the surface is not only distended and white, but the impression of the finger remains at considerable depth in the integuments: the pulse is quick and feeble, and even where there is volume it is easily compressible; but it is irregular, and there often is a grating sensation communicated to the finger. The urine is small in quantity, not very high coloured, but incoagulable by heat or acid. There is great difficulty of breathing, and often cough, with much mucous expectoration. Though the infiltration of the integuments of the abdomen at first leads to the idea of the existence of ascites, that is not really present. The case, according to our author is one of enlargement of the cavities, rather than of the muscular structure of the heart—attended, perhaps, with deposition of bone in the valves, and dilatation of the root of the aorta, with atheromatous deposits.

In all these cases, there is a greater or a less degree of congestion or condensation of the lungs.

4. A patient, probably young, applies with swelling of the lower extremities and of the face; the pulse is not weak; there is pain in the back, sometimes in either hypochondrium, and headache; no enlargement of the heart is perceptible; no violent palpitation; no movement over a large surface; thirst; no dyspnœa; the urine is abundant and pale coloured, but coagulates on the application of acids, or of heat. The dropsy in this case is the consequence of disease of the kidneys.

For the sake of distinctness, specimens of uncomplicated dropsy, arising from disease of a single organ have been separately presented. But not unfrequently more than one organ is altered, and, the causes being complicated, so are the effects.

The first chapter, at which we now arrive, is occupied with some general considerations on the causes of anasarca. The most frequent are—1, disease of the heart; 2, disease of the heart and lungs; 3, disease of the kidneys; 4, the sudden application of cold to the surface of the body; 5, eruptive fevers.

The simplest form of dropsy of the cellular membrane, is the swelling of a limb, or the extremity of a limb, without redness or heat, the part retaining, in a greater or less degree, the print of the finger impressed upon it, and the skin being white and shining: this is termed œdema. This may depend either on pressure on the veins above the swelling, or on obstruction of the cavity of the vein itself. An ovarian tumor, for example, pressing on the iliac vein occasions œdema of the lower extremity of the same side. Or, phlebitis ending in the deposition of lymph within the vein, and choking it, will also give rise to œdema of the limb below it. In cases of malignant growths, it is not uncommon to see the large veins in the vicinity loaded with the morbid matter, and to find œdematous swelling in consequence.

"Wherever great obstruction exists to the return of blood to the right side of the heart, it would be fair to conjecture, from what we see in œdema in a single limb, that the whole venous circulation would be congested, and hence

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the whole capillary arterial system would secrete fluid, as a relief to the obstruction; and if this did not occur, the balance of the circulation would be in so disturbed a state as to cause rupture of vessels in some vital structure; and this we find to be the case: the capillary arteries pour out fluid into the cellular membrane, of greater or less quantity, according as the obstruction is considerable, and of greater or less consistence as the patient's vital powers are greater or less, or the obstruction more or less sudden.

The œdema, in the first case, becomes now termed anasarca, or dropsy of the skin; the swelling is generally more in the legs, from their depending position, but the eyelids, cheeks, and integuments of the abdomen, are often greatly swollen, especially after sleep in a recumbent position. If the swelling pitted deeply on pressure, the skin being very white, and the forces of the patient broken, this condition was called by the ancients Leucophlegmasia; where the swelling was more tense and resistent, and strength less impaired, they employed the name Anasarca. As these are shades of the same disease only, I shall, for simplicity's sake, employ the latter term, as applicable to the whole disease." 11.

Anasarca, like œdema, is most commonly a symptom only, and usually it is a symptom of disease of the heart. The heart may be dilated, with or without hypertrophy. Dr. S. observes that the pulse is then increased in frequency, and sometimes but not always in force, and the heart is felt beating over a large surface. We regret that these observations are not more precise, for certainly, with the aid of auscultation, the diagnosis between dilatation with and dilatation without hypertrophy is very far from difficult or uncertain. In anasarca from enlargement of the heart, at an advanced period of life, our author assures us, that the valves are also frequently diseased, and he adds some diagnostic symptoms of the set of valves affected. If, he observes, the semilunar valves be the structure principally altered, the pulse at the wrist is smaller, while the heart beats turbulently and over a large surface in the thorax; if the mitral valves be diseased, there is more or less of a grating sensation communicated to the finger on applying it to the pulse at the wrist, and in either case the pulse intermits. The same occurs as to the grating sensation, when the heart is enlarged, and very considerable alteration of the lining membrane of the aorta above the semilunar valves, with dilatation of that tube, is found; atheromatous deposit under the lining membrane, with portions of bone being also found on dissection. In both cases, but more especially the latter, the patient is subject to very severe paroxysms of pain, lasting for the space of some minutes, hours, or even days, but alternating with intervals of perfect ease. The diagnosis of valvular disease is confessedly obscure. Even with the aid of auscultation, errors are frequently committed. If the preceding hints remove, or even materially diminish, the many sources of fallacy, they will be a valuable addition to our information.

"It is very remarkable, that disease of an artery may take place to a very great extent without dropsy occurring; while enlargement of the heart, unless death occur suddenly previously to the obstruction of the return of blood to the right side being considerable, is usually attended with dropsy during some portion of its progress. The effusion may indeed be got rid of by remedies, and the organs of the body, accustomed to the increased action, and greatly lowered in tone, still perform their functions, without a return of dropsy; but in such an instance frequently a few months only elapse before death, generally sudden, terminates the case." 13.

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As the artery is rather the conductor, than the active agent in the circulation, it is less likely, à priori, that its morbid states should give rise to dropsy, than that either obstruction in the venous system, or alterations in the heart should do so. There is little, for example, in an aneurysm of the aorta, to occasion congestion in the limbs. But if the heart acts with too much or with too little force, or if impediments exist to the returning current of blood in the veins, congestions would appear to be the natural result. This seems the most reasonable explanation of the fact to which Dr. Seymour directs attention—a fact of great consequence in assisting our diagnosis between disease of the heart and of the arteries. The following case is well adapted to illustrate the point.

Case. "A patient in St. George's Hospital laboured under considerable pain in the region of the heart, without expectoration, and with only short dry cough, ability to fill his lungs fully on inspiration, and without pain. On inspecting the thorax, the heart was observed to beat very quickly, and somewhat strongly; its rapid motion being visible in the epigastrium, while the pulse in the brachial arteries was small, and there was no dropsy, neither had there been any effusion during the course of the malady. The extremely rapid and not weak action of the heart, combined with the weak pulse, appeared to me to denote that the heart was endeavouring to overcome some considerable obstruction to the circulation of the blood; produced by a tumour pressing upon the aorta, or by an aneurism. The case attracted considerable attention, and many gentlemen examined the chest very accuraetly; all believed the heart to be greatly enlarged, though much difference of opinion existed as to the presence of aneurism. My opinion was decided as to the absence of any except inconsiderable disease of the heart, because I had never seen a case with so much disturbance in the action of that viscus, arising from enlargement, without a greater or less degree of anasarca of the lower extremities.

About a year after the patient had been in the hospital, absorption of the ribs, at the posterior part of the thorax on the left side, took place; and a large aneurismal tumour appeared, which, after death, was found to have arisen in the descending aorta, and to bave caused absorption of the bodies of several of the dorsal vertebræ, but the heart was in an entirely natural condition." 15.

The dropsy which occurs in chlorosis appears to admit of a simple and consistent explanation, in the languor of the heart's action. Congestion of the venous system, and consequent serous effusion is the result, a result removed as well as its causes by the exhibition of steel, and the proper invigorating regimen. Profuse bleedings or hæmorrhage, act we may suppose, in a similar way.

Disease of the lungs, by offering an obstruction to the pulmonary circulation, is another cause of anasarca. If that is not so general, as in cases of diseased heart, it is because the obstruction to the pulmonary circulation is usually incomplete. The disease of the lungs, too, particularly if tubercular, is gradual in its progress, and the diminution of strength, and of the quantity of circulating fluids that has accompanied it, enables the parts, in some degree, to accommodate themselves to the change. On all these accounts the extent of the dropsical effusions is limited, and they consist in some œdema of the lower extremities, and in hydrothorax.

When the heart is enlarged with valvular disease, the anasarca is often great. The serous secretion relieves the pulmonary venous system, and preserves probably, for a time, the patient's life. When the mitral valves are extensively affected, and contraction of the left auriculo-ventricular

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opening has occurred, the right side of the heart becomes dilated and hypertrophied—the blood is driven with increased force *into* the lungs, and with increased difficulty *through* them—their vessels sooner or later give way—and what is absurdly called pulmonary apoplexy is the consequence.

"In many cases of extensive disease of the lungs, however, no dropsy is found. How is this to be explained? In such cases, expectoration takes place in a very copious degree; and this secretion constantly removed, and passing away from the mucous membrane, or from a false membrane in a vomica, affords the relief more safely to the congested circulation of the patient, than that which is effected by the effusion into the serous cavities, or the cellular membrane in other cases.*" 19.

Our author passes from the consideration of anasarca occasioned by disease of the heart or of the lungs, to that of anasarca resulting from the sudden application of cold to the surface of the body. When we remember the extreme vascularity of the cutis, and the quantity of sensible and insensible perspiration secreted by it, we cannot be surprised if a sudden check to the latter, should occasion increased quantities of secretion in other parts of the body. The mucous membrane is the internal integument, analogous in function, and almost similar in structure to the skin. The secretions of the latter being suddenly repressed, those of the former are augmented, and diarrhœa is the consequence. Diarrhœa is a common result of arrested perspiration—dropsy is an occasional one. In anasarca from this cause the vessels secrete lymph, the whole cellular membrane becomes distended, and the swelling is less elastic, more resisting, the skin more stretched and shining, than in the cases where a slow relief is afforded to the obstructed venous circulation. The action of the heart and arteries is increased in force and frequency; the secretion of urine is diminished, and high-coloured; the tongue is white; in fact, a feverish condition of the body is formed; blood drawn from the arm shews the buffy coat; there is intolerable thirst present; and the remedies, both indicated and effectual, are those which diminish the increased action of the heart and arteries, and control the secretion of coagulable lymph, viz. blood-letting and mercury.

Dr. Seymour alludes to the hypothesis that dropsical effusion is always an inflammatory process. That hypothesis is opposed not only to so many reasonable conclusions, but also to so many facts, that it does not appear necessary to engage in an elaborate examination of it. But it is certain that the limits between a passive exhalation of the serous portion of the blood, and a secretion of an inflammatory character are difficult if not impossible to be determined, and ordinary dropsy readily slides into the inflammatory form. The practical physician is aware of this, and carefully discriminates and closely watches the symptoms in each particular case.

The preceding general remarks on anasarca, introduce us to a more precise investigation of its several varieties. The second chapter treats of anasarca, dependent on rheumatic disease of the heart.

The subjects of this disease are generally young. A patient, four years

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* "In cases also of solidified lung from tuberclea, even where the expectoration is not considerable, diarrhœa or colliquative sweats being often present, relieve the obstruction."

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of age, was admitted into St. George's Hospital on account of it. Dr. Seymour has seen it in patients nine years old; and the most severe case he ever witnessed terminated fatally, with great disorganization of the heart, at the age of thirteen.

" A patient labouring under anasarca from rheumatic disease of the heart, has swelling of the cellular membrane, having begun about the ankles: the face is also swelled, especially the eye-lids; there is an expression of anxiety, even greater than in diseases of the chest in general; the pulse is generally small and quick, sometimes intermitting, but very small compared with the action going on within the thorax; a tumultuous beating of the whole organ: this smallness of the pulse compared with the violence of the action in the heart itself, arises from the inordinate growth of the organ, without a corresponding enlargement of the vessels of the heart. In the most remarkable case of this kind I ever saw, the patient had laboured under the symptoms during four years, having commenced at nine years of age. The heart was enlarged to three or four times its natural size at his death, with repeated layers of lymph glueing together the pericardium: the aorta retaining the size of that vessel in a young boy of nine years. I have seen the same effect produced in adults, from contraction of the aorta above the semilunar valves. If the anasarca be very considerable, there is little pain felt in the chest, the obstructed circulation being relieved by the pouring out of the secretion from the minuter vessels. If the effusion be only commencing, there is almost always pain in the region of the heart, often pain in the course of the biceps muscle of the left arm, and cramps in the legs: the patient is unable to lie down, and the most easy position is bending forward over the back of a chair. There is also in the early stage a disposition to syncope.

If the effusion has taken place for some weeks, the pain and disturbance in the chest are less felt, and the patient attributes all his sufferings to the dropsy. The legs are tense; the face swelled, and of a pale bluish tint; great difficulty of breathing; the urine very scanty and high coloured, and where unaccompanied by disease of the kidney, does not coagulate by the usual method; the pulse quick and weak; the surface of the body cold; there is present a short dry cough without expectoration, or with a very slight frothy expectoration, occasionally tinged with blood." 26.

On questioning such a patient, we ascertain the previous occurrence of attacks of redness, swelling, and pains in the limbs. If he dies we find hypertrophy and dilatation of the heart, with adhesions (usually old, if there is dropsy) of the pericardium. Those adhesions are obviously the result of rheumatic inflammation. Dr. Seymour does not offer a minute history of this very interesting and important disorder, his object being rather to treat of its consequence—dropsy—than to enter on a circumstantial description of *its* causes.

He observes, with much truth, that in these cases, even when severe, the progress of the disorder is comparatively slow. The reasons that he adduces are, no doubt, correct. 1. The patients are generally young, and the growth of the chest allows it to accommodate itself to the enlargement of the heart;—2. Other viscera are usually sound, which is not the case in those forms of dropsy that arise from the abuse of stimulants.

The treatment of anasarca arising from rheumatic inflammation of the heart must vary with the period and state of the latter. If inflammation of the pericardium is still going on, the remedies must be antiphlogistic—cautious bleeding—calomel and opium—blisters. The diuretic which Dr.

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Seymour prefers is nitre, exhibited in mint water twice daily, in doses of from ten to fifteen grains. He has not himself seen much benefit from colchicum; on the contrary, he has seen it occasion great depression of the vital power, and increased irregularity in the action of the heart.

But if the inflammatory symptoms have ceased—if the anasarca is considerable, and the skin pits deeply on pressure, the object is to procure a copious diuresis. In this case our author speaks highly of the effects of digitalis, a remedy first formally introduced by Dr. Withering, who remarked that it will be found most effectual in a lax state of the system, where the effusion is considerable, and the action of the heart and arteries feeble—a remark in which our author fully coincides with him. The form of digitalis preferred by Dr. S. is the infusion—the formula he offers is this :—

℞. Infusi Digitalis, ʒiv.
Liquor. Oxymur. Hydrarg. ʒij.
Aq. Menth. Sativ. ʒviij.
Træ. Cantharidis, ♏xxx. M. Fiat haustus bis terve in die sumendus.

"The Tinct. Cantharidis, in itself an active diuretic, renders almost every other more effectual; but it is contra-indicated in aged persons, where disease of the urinary organs is present. The rapidity with which the above draught operates, is quite astonishing: I have seen as much as a gallon and a half of urine voided in one night, after the second day of its employment. From the presence of the oxymuriate, however, it will sometimes purge—an effect to be prevented; for this purpose, a pill, consisting of a grain of opium, should be given every night, at bed-time." 32.

In patients, whose circumstances relieve them from anxiety, exposure, and toil, the removal of the dropsy brings not only present relief, but a temporary though precarious respite from the disorder. But individuals in the lower classes of society quit the hospital only to be exposed to fresh exciting causes of the malady, and we cannot be surprised at the relapses which occur in them.

From anasarca following rheumatism, our author steps to anasarca occasioned by active enlargement of the heart. This is most commonly the effect of that unfortunate indulgence in spirit and porter-drinking, so prevalent in large cities. It occurs from twenty years of age to sixty, although it may arise at an earlier epoch. We lately saw a young gentleman, who died from dropsy dependent on hypertrophy and dilatation of the heart, before he had attained his twentieth year.

"The anasarca in this instance is enormous, the whole cellular membrane of the body being greatly distended; the integuments of the abdomen being increased to a size which appears at first sight impossible, without effusion into the abdominal cavity, and yet on striking the abdomen no fluctuation is perceived. In extreme cases, the distention is so great that the cutis splits into laminæ, giving the appearance of fine threads, dividing its texture transversely; at others, effusion takes place, in large blisters on the legs and extremities, which by bursting and discharging serum, for a time alleviate the distress. The pulse is generally strong and quick, the urine scanty and high coloured, and does not coagulate by heat, or the admixture of acid; the tongue is furred, the patient obliged to be raised in bed, and complaining of an insupportable oppression. The face is swollen, and often with a bluish tint, and there is constant

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thirst; the bowels are generally natural in their functions, and the appetite little deranged." 34.

When the anasarca has become excessive, the speedy relief of the distended integuments becomes absolutely indispensable. If the fluid is allowed to remain in such quantity in the cellular tissue, erysipelatous inflammation, first of the skin, then of the cellular membrane, will ensue. Formerly scarifications were made in the integuments, an effectual method of drawing off the water, but a very dangerous proceeding; for diffused cellular inflammation and gangrene very frequently followed it. Latterly punctures of the skin with a needle have been substituted for the scarifications. This is a comparatively safe operation. We are constantly in the habit of performing it, and it is seldom followed by any bad effects. The punctures should not be made in parts which will be subjected to pressure—they should only go into the cellular membrane, not through it—they should not be too numerous—nor should the operation be repeated at too short intervals. With these precautions we may count on seldom seeing mischief follow the use of the needle. A slight degree of diffuse inflammation of the skin and cellular membrane now and then occurs when punctures are made, but warm fomentations and bread poultices made with weak tepid goulard water usually disperse it. We lately, however, operated on a gentleman, labouring under dropsy from extensive disease of the heart, in whom the skin of both legs sloughed, after the acupuncturation. The patient died. Puncturing then is not devoid of danger, but it is infinitely less dangerous than scarifying.

What remedies must we employ, besides these merely mechanical means of easing the stretched skin? If the strength is yet unbroken, we may abstract some blood, and then employ a medicine of great power, in producing serous evacuations—the elaterium. Dr. Seymour begins with half a grain, and recommends the following formula.

"℞ Elaterii*, gr. ½.
Subm. Hydr.
Pulv. Capsici, āā. gr. ij.
Conf. Ros. Canin. q. s. ut ft. pilula, mane sumenda."

In private practice it is advisable to begin with a smaller dose than half a grain. We usually prescribe an eighth of a grain at starting, and we have seen such violent effects from a quarter of a grain, as obliged us to discontinue its use. The elaterium would appear to be of varying quality, and whenever it is procured from a fresh shop, or taken from a fresh supply, the physician should be informed of the circumstance. It has happened more

* "It must be observed, that the elaterium is most applicable in cases where the bodily powers are yet strong. Thus I was more successful in its use, in cases in the Seamen's Hospital, where the patients were hardened by exercise, and inured to exposure, than in St. George's Hospital, where many of the patients are from a class accustomed to long confinement and little exercise. Improperly administered, elaterium is apt to produce a diarrhœa, from which the patient never recovers.

Dr. Cullen used very successfully three grains of gamboge with sugar, every three hours. Such practice, though it produces frequent watery evacuations, is very inferior in power to the elaterium." 35.

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than once that a furious purging has suddenly come on, and has been traced to the patient's having taken elaterium of a different quality from that which had been previously administered. The effects of this drug are frequently highly satisfactory, nay surprising, and it exerts almost a magical effect on the dropsical effusion. It produces watery motions, on which those effects depend. But it must be solicitously watched.

"When this remedy fails, or when it ceases to have the desired effect, I have succeeded in a manner which has greatly pleased and surprised me, in evacuating the fluid by large doses of cream of tartar. Small doses of this salt are among the most popular remedies for dropsy, increasing the flow of urine, whether as a beverage with lemon peel and ginger, under the name of Imperial, or with gin and sugar made into a kind of punch, whose diuretic properties are undoubted. But about seventy years since, Menghini, an Italian physician, recommended this medicine in far larger doses, as a deobstruent, and averred that he had cured many cases of dropsy by its exhibition.

He recommended an ounce to be taken every morning in water; the salt requiring about thirty parts of boiling water for its solution; and states that patients recovered with the use of no other remedy: he adds, that the urine let fall a sabulous deposit at the time." 38.

It is in this form of dropsy, that Dr. Seymour has seen the supertartrate of potass of most service. An ounce of it is given in solution every morning, or, if this acts too violently, the dose may be diminished to half an ounce. After the fourth day its beneficial influence generally commences.

Anasarca, from dilatation of the heart unattended with hypertrophy, is considered next. It is most frequently witnessed in the old, and is the result of intemperance, anxiety, watching, and long-continued profuse evacuations, all powerful causes of debility. Dr. Seymour assures us that it oftener exists in females than in males.

"The pulse is weak, often irregular; at least, even where there is volume, it is very compressible. The anasarca, which is very extensive, takes more the form of what has been termed leucophlegmasia: the face is swelled, and of a ghastly white appearance, while the integuments pit on the slightest pressure. The effusion is always preceded by difficulty of breathing, especially on any quick motion, by violent palpitation, and disposition to syncope. The difficulty of breathing is not, as in the former instance, much relieved at first by the effusion; for not unfrequently the cellular membrane connecting the lobules of the lungs is infiltrated also.

It is in this form of dropsy that sudden death frequently occurs. The patient may be apparently doing well, the swellings gradually receding, when a sudden return of effusion, either into the chest or pericardium, is followed by almost instant death.

This form also is often complicated with dilatation of the arch of the aorta, and deposition of atheromatous matter with spicula of bone under the lining membrane. In such cases there are not only all the evils arising from oppression and distention present, but also paroxysms of most severe pain, similar to what is experienced in ossification of the coronary arteries, and is termed angina pectoris." 41.

Perhaps exception may be taken to two statements in the preceding passage. The first is the observation that passive dilatation of the heart is often complicated with dilatation of the arch of the aorta, and with deposition of atheromatous matter and spicula of bone beneath the lining mem-

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brane. Setting aside our own observations, a large body of evidence has been adduced by Bouillaud and others, demonstrative of the co-existence of disease in the arterial tunics, including this affection of the arch of the aorta, with the forms of hypertrophy, rather than with simple dilatation of the heart. It is, indeed, most consistent with reasoning that it should be so; for whether the disease of the heart or of the artery arises first, it must naturally tend to induce the other. An inelastic artery demands more exertion from the heart, and a hypertrophic heart must necessarily tend to produce dilatation and disease of the artery.

The second remark to which we allude would tend, if we rightly understand it, to fasten the cause of angina pectoris on ossification of the coronary arteries—an opinion which is now pretty generally given up. Probably, our author does not intend to advocate it so exclusively as the apparent sense of the passage seems to do. It must be remembered, as we have already stated, that the references to the affections of the heart, and to their symptoms, are rather incidental than direct—and that our author must be held excused from discussing them at any length. This reflection will tend to account for the silence maintained on the subject of auscultation and percussion.

To return to the form of anasarca before us. It is in it, that digitalis is commonly most serviceable. It may be combined with squill and mercury, as in the pil. hydropica, (pil. hyd. gr. iij.; scillæ exsicc., pulv. fol. digitalis, āā. gr. i.) or in infusion with the liquor. oxymur. hydrarg. in mint water; and if the patient labour under no disease of the bladder or urethra, with the tincture of cantharides.

The mention of cantharides leads our author to pause, and to make a few remarks upon their powers.

a. Although Cullen, on the authority and in consequence of the experiments of Dr. Carmichael Smith, spoke slightingly of the cantharides as a diuretic, Dr. Wells is said to have found them of some service, and Sir Henry Halford informed Dr. Seymour, that he had observed them occasion a copious and a salutary flow of urine, in two severe cases of hydrocephalus. Hence our author was led to add this medicine to the infusion of diuretic vegetables; and the combination of tincture of cantharides with infusion of digitalis and oxymuriate of mercury has proved in his practice a powerful diuretic.

b. Dr. Seymour has derived considerable benefit from the cantharides, in the treatment of paraplegia. When it has done good in those troublesome, too often melancholy cases, it has displayed its diuretic properties. He relates two cases, and alludes to two more in confirmation of this statement.

We proceed with the drugs adapted for the treatment of the anasarca which forms the subject of the chapter.

"The nitrate of potass in solution, in the dose of fifteen grains; the acet. of potass, in the dose of from one to two drachms, either in its usual form, or made by neutralizing in solution the carbonate of potass with the vinegar of squills; may be given in a draught, with a pill, consisting of three grains of the blue pill, several times in the day; or a kind of punch may be given, made with cream of tartar instead of lemons, to every pint of which two ounces of gin may be added; all these are very effectual diuretic drinks. The latter is very convenient in hospital practice.

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The spirit of nitric æther may be added, in the dose of a drachm, to a draught containing ten grains of nitre dissolved in mint-water; or it may be given as a beverage in the proportion of two drachms, or two drachms and a half of æther, in six ounces of water: in this latter form it is not disagreeable.". 50.

Squill, combined with mercury, is adapted for those cases in which blood-letting is necessary, on account of its nauseating properties. When the stomach will not bear it, friction with it has been tried. The powder rubbed down with lard, in the proportion of half an ounce of the former to about an ounce of the latter, is the form proposed.* Our author says little in favour of the veratria ointment, or of the hydriodate of potass. He alludes to the old and bye-gone notion that drinking is injurious in dropsy, a notion embodied by Horace in the ode:—

> Crescit indulgens sibi dirus hydrops,
> Nec sitim pellit—

He passes in succession the infusion of the pyrola umbellata, an uncertain, an irritating, yet occasionally useful diuretic—the infusion or decoction of the broom tops—the garlic, which he has not seen of service—the infusion of the apocynum cannabinum or white hemp, of which he speaks disparagingly—and the application of cabbage-leaves to the legs, which have previously been gently rubbed with volatile liniment. As a resumé, he would place the particular diuretics in the following order, corresponding to their powers:—Infusion of Digitalis with tinct. cantharid. Nitrate of potass. Supertart. of potassæ with sp. juniper. c. Pil. hydrarg. pulv. dig. et scillæ exiscc.; in form of pill. Acet. et tinct. scillæ. Infus. pyrolæ umbellatæ. Infus. spartii. Sp. ætheris nitrici. Sp. armoraciæ comp.

In practice, diuretics may be simply arranged, as—those which exert some positive depressing influence—those which are little more than mere diuretics—and those which are stimulants too. It is the application of the one or of the other class to the features of the case and the condition of the patient, which constitutes judicious treatment. How frequently we see the most heterogeneous combinations—calomel, squills, digitalis, and gin, given at the same time, and apparently with the same view. It is true that in dropsy, as in other diseases, it is sometimes requisite to blow hot and cold, to support or even to stimulate at the very time that we employ special debilitating remedies. Such modes of treatment are particular, however, rather than general—the exception rather than the rule. And in this, as in other instances, the able physician is characterised by his application of those general principles both of reasoning and practice, which belong to science, not by an inveterate leaning to a faith in specifics, the sure evidence of empiricism and of art.

Our author lightly hints the necessity of those general measures—a mild diet—rest—pure air—passive exercise, and so forth, which will readily occur to the mind of the well-informed reader; and he deplores the ordinary fate of patients in the lower classes, whose intemperance commonly occasioned the disorder, and whose necessities, and too often whose resumption of intemperance, combine to render relief transient, and a fatal termination speedy.

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* One drachm of this ointment may be rubbed in three times daily.

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He makes a concluding observation, the justice of which will be acknowledged by all who are practically conversant with dropsy.

"It sometimes happens that after a long and very unsatisfactory course of treatment, with little effect in reducing the swellings, and thus relieving the oppression of the patient, the fluid, after the administration of some trifling remedy, begins suddenly to subside, with a rapidity equally astonishing and cheering to the patient: his attention being always fixed upon the dropsy, the symptom of the disease, he feels delighted at getting rid of what he considers to be the whole malady.

Such subsidence of the effusion in dropsy, unpreceded by a gradually increased flow of urine, or by the use of remedies calculated to produce evacuations, and which by being administered during a long period, hinder, at least for a time, the re-collection of the fluid, is a very fatal symptom; the vital powers are no longer sufficiently strong to afford relief to the obstructed circulation, secretion from the smaller and more minute vessels no longer relieves the labouring heart. In several cases which have fallen under my observation, the patient has never rallied after this sudden subsidence of the effusion beyond a month: but I have heard of life being prolonged somewhat longer. A case of this kind is to be found in the experience of the late Dr. Parry, of Bath." 57.

We have arrived at the fourth chapter, and we leave behind us the organic diseases of the heart. The form of anasarca, which is now to occupy us, and to which this chapter is appropriated, is independent of any lesion of an internal organ.

1. The sudden impression of cold and wet on the surface of the body, though it usually gives birth to other mischiefs, will at times occasion anasarca. The swelling is hard and tense, the pulse hard, the urine very scanty and incoagulable by heat or acids, the heart beats without symptoms of organic disease, though its action is increased, the bowels are costive. There is in this state a general feverish excitement; the vessels of the skin, over the whole surface of the body, secrete serum, and the mucous membrane is deprived of the natural secretion which these vessels pour out in a state of health. The sudden sequence of the anasarca to the application of cold, the probably previous good health of the patient, and the absence of the symptoms of any organic cause of the disease, are the distinctive marks of this form of dropsy.

The treatment is obvious, and generally successful. Bleeding (the blood is almost always cupped and buffed)—calomel and opium—saline purgatives—protection from the influence of cold, are its main items. The patient should not venture out too early.

2. It is well known that scarlet fever is occasionally followed by anasarca. Its pathology is not well understood, but it seems to be less frequent and less fatal than formerly. Its origin has been attributed to cold—to weakness—and Dr. Seymour leans to its being the result of deficient purging, for he has seldom if ever seen it, where saline remedies were freely used, especially towards the decline of the disease. It is not improbable that diarrhœa, natural or artificial, may tend to prevent the occurrence of anasarca, the efficient cause of which is, perhaps, to be sought in the excessive vascular action of the skin in scarlet fever, and in the necessary congestion of its vessels, which traverse the subcutaneous cellular membrane. Yet the liability to anasarca does not seem to be in the ratio of the severity of the scarlet fever, a slight attack of which will sometimes give rise to it.

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"Anasarca, after scarlatina, begins generally from the fourteenth to the eighteenth day after the commencement of the disease—sometimes gradually, sometimes within the space of a very few hours; the patient is enormously swollen, so that the eyes are closed; the countenance white, shining, and swollen to an enormous extent; the secretion of urine of a deep colour, and in very small quantity. In many instances the urine is mixed with blood, and in such cases coagulates. (See a paper by Dr. Wells, in the first vol. of the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge.) There is thirst, a furred tongue, and even, on the onset, heat of skin; sometimes, but rarely, difficulty of breathing and headache: the integuments of the abdomen as well as the scrotum, and the rest of the cellular membrane of the body, are anasarcous in the highest degree." 66.

The treatment should be antiphlogistic, at least if the previous fever has been slight, and if the strength of the patient is unbroken. Bloodletting may pave the way for smart purging, with calomel, and a diuretic drink, made, perhaps, with the spiritus ætheris nitrici. If, however, the patient is debilitated, bleeding and active purging would obviously be improper, and we must chiefly lean on diuretics. The combination of the infusion of digitalis with the infusion of gentian, to which may be added the liquor potassæ —or the decoction of the pyrola umbellata, with the tinctura lyttæ, have been highly serviceable. In no case has our author seen tonics alone successful. He hints that the vapour-bath may be useful—but bloodletting must have been premised.

Anasarca, however, is not the only form of dropsy witnessed after scarlet fever—nor is it the most formidable. Ascites, hydrothorax, and hydrocephalus may occur, and although they are of course more tractable than when created by organic lesions, they must be looked on as more serious than anasarca. Dr. Seymour relates an interesting case, in which effusion would seem to have taken place within the cranium. The interest is physiological as well as pathological.

Case. A married woman, aged 36, was admitted some years ago into St. George's Hospital, under the care of Dr. Seymour, with a slight attack of scarlatina: the efflorescence was bright, continued three days; the throat was slightly ulcerated; and the cuticle desquamated as usual. During the efflorescence she was sponged with cold water and vinegar; the bowels were freely opened; first, fomenting gargles, and subsequently astringent ones, were used to the throat, and the case proceeded to convalescence readily. At the expiration of ten days she appeared to be quite well, and remained only in the hospital as a precaution against taking cold. About the fourteenth day from the commencement of the disease, she was suddenly attacked with pain in the head, loss of speech, followed by paralysis of the sphincters, dilatation of the pupil of the eye; all which symptoms were formed in the course of a day and night. The pulse was quick and small, and there could be no doubt of effusion having taken place into the head. She was ordered to be bled to sixteen ounces; two grains of calomel were put upon the tongue every three hours; and a blister applied to the top of the head, and kept open with mercurial ointment; half an ounce of the infusion of digitalis being put down the throat with a spoon, the intermediate four hours.

She gradually recovered. But the integrity of the mind was very slowly

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re-established. She understood all that was said to her, but could not remember the words to express her answer. Thus, when asked what o'clock it was, she explained herself by signs, not being able to remember the words: subsequently she used words, single, and unconnected by articles, so as to express her meaning, but not in a sentence. By degrees this power of expression returned; and at the end of a month she was quite well. Two years afterwards, she was seen by Dr. Seymour and remained in perfect health. It is difficult to reconcile cases like these (and there have been many) with the opinion, that different portions of the brain do *not* perform different intellectual functions. What we call the intellect is indeed an aggregate of many faculties. Metaphysical analysis seems capable of resolving and of isolating them. Whether that analysis be accurate or not, such cases as the preceding conclusively prove that a coarse organic lesion, a tea-spoonful of water, a particle of lymph, or a spiculum of bone, will play the metaphysician's part, and single out some particular mental quality for impairment or destruction. In this instance, there was a loss of the memory of words.

At times scarlet fever is accompanied or followed by a very decided, and a very dangerous inflammatory effusion in the chest. Empyema is the consequence. There have been several cases of this kind in St. George's Hospital.

3. Anasarca occurs in cases of chlorosis, or it may ensue after great loss of blood. Its cause is of a similar character in both cases. The heart having too little, or too diluted blood to circulate, would appear to make up in rapidity of action what it wants in force. Dr. Seymour conjectures that the blood shews a disposition to stagnate in the right side of the organ. Perhaps this may be questioned. But whether the supposition is correct or not; whether the immediate cause is or is not congestion in some portion of the venous system, it is certain that the serous part of the blood is apt to be separated, and that partial or general anasarca ensues. The ancles and legs swell, the face is puffy and white, the pulse in slight cases is languid, in severe ones rapid and weak, there is palpitation, headache, hurried or difficult respiration—symptoms, in short, very characteristic and very familiar.

The treatment in such a case must be gently tonic; yet the physician must feel his way, for tonics may not be borne at first. We need not mention the principles that should regulate our exhibition of the fetid gums, ammonia, steel, nor need we dwell on the necessity for pure air, appropriate exercise, occupation or amusement of the mind, those general measures which assist the operation of medicines so much, and without which medicines are comparatively powerless.

The fifth chapter is dedicated to the examination of a disease, which may be said to have appeared within these few years on the medical horizon, and for our knowledge of which we are principally indebted to the diligence of Dr. Bright. It is anasarca arising from disease of the kidney.

The distinctive marks of this interesting and formidable malady may be readily enumerated. The anasarca is rather seen in the lower than in the upper portions of the body. Yet the face is usually puffy, and the skin is singularly pale and dry. The absence of decisive symptoms (and here auscultation is peculiarly valuable) of affection of the heart, shews that that organ is not the cause of the dropsy. And the coagulability of the urine,

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on the application of acids and of heat, is the evidence of alteration of the kidney. The specific gravity of the urine is always diminished, and there is frequently a deficiency of urea in it.

The quantity of the urine varies. It is sometimes scanty and high coloured; but in the worst cases the urine has been found to be pale and abundant, while the anasarca was general and to a great extent. In such cases the disease is very fatal; and the condition of the kidney, its extensive disorganization and destruction visible after death, explains the reason why anasarca, without any diminution of the secretion of the urine, was always looked upon as a condition of disease unusually hopeless.

In the slight cases, in which the coagulability of the urine is least decided, the kidney may be simply congested or engorged. In the severer cases, or, in other words, when the disease has made more progress, the quantity of albumen in the urine is augmented, and the kidney has assumed the granulated state so well described by Dr. Bright. This concurrence of symptoms and lesion is now established as a general fact, by numerous and accurate observers.

It not unfrequently occurs that we discover after death, disease of the liver and the heart, in addition to disorganization of the kidney. It is well known that Dr. Bright has ingeniously argued that the kidney was the organ primarily affected, and that the disease of the heart resulted from it. This is perhaps the weakest point in the observations of that able pathologist, and we quite concur with Dr. Seymour in the following remarks upon the subject.

"Where disease of the liver, heart, and kidneys, exist in the same patients, Dr. Bright appears to believe that disease of the kidneys is the primary disease, and the disorganization of the other important structures secondary. It is more clear to me, that the same cause, the abuse of ardent spirits, or long-continued and repeated exposure to cold, which has produced disease in one viscus, has also affected the others. We know that disease of the liver and of the heart proceed from intemperance; and instances are not wanting of disease of the kidney producing anasarca arising from this cause, and existing alone. One of the worst cases I ever saw, of anasarca with coagulable urine, was in a youth of nineteen, who had been addicted to the immoderate use of spirits, rum principally, and no other viscus was diseased except the kidneys. Again, how often do we not find, after hard drinking, enlargement of the heart and liver accompanied by anasarca and ascites, while the kidneys remain perfectly sound?" 76.

A very good proof of the exactness conferred on medicine by morbid anatomy is presented to us by this very affection. It is only within these last few years that we have learnt the dependence of anasarca on renal disease, and we find that it exists in a very large proportion of cases. Dr. Seymour makes the following rough calculation of the relative number received into St. George's Hospital.

"About half the cases of dropsy admitted into St. George's Hospital, in my experience, have coagulable urine: and in about one-third of such of these cases as have proved fatal, the kidney was the only viscus diseased: the other two-thirds had disease of the heart and liver in addition to granulation of the kidneys. Of those cases of anasarca without coagulable urine which proved fatal, the heart was invariably greatly enlarged; and these were often complicated with ascites from disease of the liver." 76.

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There are some circumstances connected with coagulability of the urine and organic alterations of the kidney, which may not improperly be glanced at here. We shall merely hint at them, because their consideration would occupy us long, and withdraw us from the pursuit of the history of dropsy.

1. The urine, after scarlatina, may contain an admixture of blood, and be, of course, coagulable. And in dropsies from cold, accompanied with an inflammatory condition of the system, coagulability may also be present, and is removeable by antiphlogistic treatment. In these cases we must suppose that the functions of the kidney only are disturbed—a view borne out by numerous facts which prove that an albuminous state of the urine is not necessarily dependent on organic lesion.

2. There is no doubt that several organic lesions of the kidney will give rise to coagulable urine. They would appear, however, to have this in common, that they are attended with congestion or a state of chronic inflammation of the organ. It is difficult to say, why in one case dropsy is present, whilst in another it is not—and it is still more difficult to understand, why furious symptoms of irritation of the bladder should exist in one instance, and be totally absent in another, where the organic lesion is apparently of a similar description. We may fairly conclude that the diseases of the kidney have not yet received all the elucidation they are capable of, certainly not all that is desirable.

The study of morbid anatomy is apt to lead those who pursue it very closely, into an inert method of practice. Constantly witnessing extreme organic lesions, they insensibly contract the notion that it is idle attempting to remove such structural alterations by remedies; and they forget that what they witness is the termination of actions that may in many cases be controlled. It is certain that the best pathologists are not unfrequently indifferent practitioners, and whilst their diagnoses have all the accuracy which science can confer, they do less for the cure of the disease they have discriminated, than comparatively ignorant but decided men who confidently trust to their empirical experience. It is the combination of the knowledge of morbid anatomy with the numerous resources of practical experience, that constitutes the accomplished physician or surgeon.

If we have determined that anasarca is frequently the effect of organic alteration of the kidney, we must not therefore sit down in despair and abandon the patient to his fate. Those organic alterations though irremediable when far advanced, present no doubt remediable stages, and it is our business to ascertain by experiment what can be done for their mitigation or removal. Fortunately the intimate sympathy which exists between the kidneys and the skin, opens to us a mode of acting on the latter, a mode which has been seized by observant practical physicians. Dr. Osborne, in a work on dropsy, has particularly drawn attention to the necessity and the advantage of inducing perspiration, when that is possible, in the form of dropsy before us. The following are the observations of our author, which are strongly in support of Dr. Osborne's views, and calculated to encourage us in our efforts to relieve our patients.

"Dr. Wells cured three cases out of five, of anasarca with coagulable urine, with cantharides; and Dr. Mead recommends them in lepra, from their diuretic property. Dr. Bright states that he has succeeded with the cream of tartar in several instances, and I have found this medicine far more useful than any other

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in dropsy from disease of the kidney; but looking to the functions of the skin, I have employed also the vapour bath, using this remedy on alternate days. The perspiration excited by the vapour bath is excessive, and its use should be graduated to the patient's strength. I have found this remedy far superior to any internal one known to produce diaphoresis. Where there is pain in the lumbar region, as not unfrequently occurs in an aggravated form of the disease, cupping is very useful, and every intercurrent inflammatory disease I have been in the habit of treating exactly as if no dropsy had existed, according to the symptoms and locality—blisters only being excepted, from their being often followed by erysipelas, and even sloughing." 78.

A case is related which exhibits the good effects of this rational system of management. It is not necessary to introduce it here. But before we dismiss the subject, we may allude to the frequency with which inflammatory attacks of other organs occur in patients with diseased kidneys. This is a fact which has been pointed out by Dr. Bright, who has also dwelt on the liability of such patients to cerebral oppression.

ASCITES.

The second part of Dr. Seymour's work takes up the consideration of ascites, or dropsy of the abdomen. This may depend, as we have seen anasarca do, on disease of the heart or of the kidneys, or rather it may exist with anasarca in those cases. In them, however, it is usually both inferior in degree and in importance. Where the kidneys only are diseased, our author thinks that it is not generally perceived; and when the heart only is affected, it is certainly subordinate to the infiltration of the cellular membrane. The explanation of this circumstance which he offers, is probably the just one. The circulation in the abdomen is peculiar: the greater quantity is expended in forming the important secretion of bile from the vena portæ, and the remainder only is returned by the hepatic veins to the right side of the heart. The obstruction therefore to the heart's action, arising from enlargement or disproportionate dilatation of the cavities of the organ, will affect the venous system in the abdomen far less than throughout the whole body: hence it is that anasarca is the most common form of dropsy attendant on disease of the heart, and where this important viscus is alone diseased, ascites scarcely appears.

The principal cause of ascites is disease of the liver. There have been many opinions on the manner in which hepatic disease gives rise to it, and even now the minds of pathologists would appear to be far from made up with respect to it.

The old, and perhaps the common idea, attributes ascites to the bulk of the liver, which, pressing on the vena portæ, produces congestion in the capillary veins from which it springs, and, as a consequence of that congestion, serous exhalation. But this notion seems overthrown at once by the fact, that simply enlarged liver is found to be rarely a cause of ascites, and that when the organ is much increased in bulk by depositions of encephaloid tubercles in its structure, ascites is not necessarily present.

"The most frequent appearance of disease of the liver, and that which is most generally connected with ascites, is characterized by diminution of the bulk of the viscus: the liver is about one-half its natural size, very hard, and with the sharp edge, so characteristic of it in a state of health, blunt and rounded.

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In post-mortem examinations, instead of finding it protruding into the belly, we seek for it under the ribs in the right hypochondrium, and find it there drawn up, as it would seem, from its diminished size. The peritoneal coat is in such case most frequently found thickened: this not unusually takes place in parts, and this partial thickening gives to the viscus the appearance of being puckered, not very unlike the lobulated structure of the calf's kidney. On cutting into these portions, the viscus itself does not present corresponding depressions, but the appearance arises from the membrane having been thickened in parts. Occasionally the whole peritoneal coat is thickened, of a milky white colour, and the viscus beneath contracted, extremely hard to the knife, and presenting a round almost globular mass when removed from the body." 85.

The thickening of the peritoneal coat has led some authors to suppose that inflammation of it alone would be sufficient to occasion the disease. The cause appears, on a close examination, disproportionate to the effect, and it seems difficult to admit the supposition, that inflammation of the peritoneal investment of the liver is able to produce what much more extensive peritoneal inflammation does not. The explanation offered by our author is much more consistent with our general pathological knowledge. He assumes that the result of the change in the viscus alluded to is—uniform pressure on and obstruction of the minute and secreting branches of the vena portæ. The consequences of such obstruction are obvious.

To support this view he alludes to another case of ascites, in which the secreting structure of the liver is nearly obstructed by the deposition of a reddish-white substance, by some believed to be lymph, and the effect of inflammation, by others supposed to be cholesterine; but in either case, on a section of the liver, the whole seems to be made up of rounded masses, which, in some instances, can be separated from the cellular membrane which connects them, though the change is uniform throughout the whole mass. In many such cases the peritoneal coat is quite clear and transparent, proving that causes exist, independent of its thickening, to produce such an obstruction to the progress of the blood, as to act as the proximate cause of dropsy.

A difficulty indeed occurs, and it may naturally be demanded, how, if this physical explanation be acceded to, shall we explain the absence of ascites, in cases where the structure of the liver is quite altered—where its parenchyma is converted into a fatty mass, or of a very pale yellow colour, or almost superseded by encephaloid tubercles? Our author anticipates the question, and offers the following reply.

"That such cases have occurred there can be no doubt; and it appears to me to be accounted for by the alteration in the circulating fluid itself: there is a degeneration of the whole body, the arteries do not secrete fluid, in order to keep up the balance of the circulation, impeded by the disease of the viscus; but both solids and fluids undergo a degree of degeneration, and the whole system tends to decay. The appearance of persons labouring under this form of disease confirms this idea; the countenance is of a waxy yellow colour; no red blood appears circulating on the surface; the principal ailment complained of is excessive weakness, sinking, often without any local pain; the pulse is weak, and about a hundred in a minute; the patient is emaciated, and the muscles have lost their firmness and colour; in blood drawn from the arm, the red particles are scanty, and the fibrin scarcely adheres; a weakened state of the nutritive fluid, adapted to the weakened state of parts which act in the function of secretion, and both tending to the undoubted death of the patient." 87.

We fear that this reply will be deemed inconclusive. Granting the gene-

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ral decay insisted on, that does not satisfactorily explain why a physical cause should not be succeeded by a physical effect. The debility which exists in these cases, would appear, from what we know of dropsy, to be rather favourable than otherwise to its occurrence, and that very debility and anæmia have been seen, in chlorosis and after exhausting hæmorrhages, to give rise to anasarca. It must be owned that some obscurity surrounds the immediate cause of dropsy. In some cases physical obstructions to the course of venous blood, or obvious congestions in the venous system, afford a ready and a simple explanation of the serous effusions that ensue. But in others, we look in vain for such satisfactory causation. It is not for example clear, why, on the principles alluded to, disease of the kidney should give rise to dropsy—why hydroceles should occur, as they sometimes do, in young and comparatively healthy persons. It is probable that the condition of the blood itself, as well as of the solids, exerts an influence which is far from understood, in the production of some of these effusions. Be that as it may, we leave the consideration of this question to proceed with the history of ascites. Let us again observe, that, according to our author, its most frequent, most obvious, and most indomitable form arises from a hard, contracted state of the liver, with a thickened peritoneal coat—while a second kind results from an universal alteration of its secreting structure, by the deposition of a reddish-white matter, supposed to be coagulable lymph by some, cholesterine by others, and unaccompanied by any change in the peritoneal investment.* The picture of an ascitic patient drawn by Dr. Seymour will be recognized as a faithful one.

"The external appearance of a person labouring under ascites from either of these causes is in striking contrast with those cases of anasarca which arise from disease of the heart. When some induration of the liver accompanies disease of the heart, both ascites and anasarca are present, but the abdominal effusion is small in quantity, compared with that which takes place in the cases I am attempting to describe: in the former, the increase of bulk is principally owing to infiltration of the cellular membrane connecting the muscles of the abdomen; in the second, these muscles are wasted, the fat absorbed, the distended abdomen is tense in every part, the swollen veins give to the whole a bluish appearance, while the hands and arms are wasted, the features drawn in and haggard, presenting the appearance of what has been termed 'facies hippocratica;' the legs are also often wasted, and indeed always, early in the disease, but at length the pressure of the immense body of fluid in the pelvis prevents the return of blood in the iliac veins, and the lower extremities become anasarcous. The pulse is quick and feeble; the tongue red, and rough with prominent papillæ, and sometimes aphthous; the urine is very scanty, and deposits a pink sediment, like the finest rouge; the thirst is insupportable; and the alvine excretions scanty and ill-coloured, the bowels being sometimes difficult to move, at others affected with diarrhœa." 89.

Unfortunately the treatment of such a case may be speedily dispatched. What can we reasonably expect to do? In a recent case, mercurials, moderate purging with senna and crystals of tartar, diuretic drinks, especially a

* We may observe, by the way, that it is doubtful whether the thickening, said to occur at times in the peritoneal coat, has really that site. It is more likely to exist in the cellular capsule, beneath the peritoneum. Such appeared to be the case in some dissections which we made, but we have not examined the matter narrowly.

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solution of nitre, perhaps, for those who have faith in its *mild* virtues, the dandelion, are remedies appropriate, we might wish to add, successful. When the disease is far advanced, the judicious physician thinks of little more than relieving suffering and supporting strength. Mild tonics, especially a weak acidulated solution of quinine, moderate purgation, and when the quantity of fluid demands it, the operation of tapping, almost compose our means of treatment.

The period at which tapping is necessary, has occasioned some difference of opinion in the profession. While some have recommended it as soon as the fluid has become very abundant, others have advised a fair trial of medicines first. On the whole, there can be little doubt of the propriety of the latter opinion, especially in private practice, where both patient and physician are anxious to avoid an operation.

The character of the fluid abstracted is not in all cases the same. Where the liver has been contracted during a long period, has a puckered peritoneal coat, or that membrane is thickened like semi-transparent horn, its sharp edge having entirely disappeared, or where the secreting vessels are uniformly obstructed, the fluid drawn off is quite limpid, and enormous in quantity. Often the fluid is of a pale yellow colour, more or less tinged with bile, and it soon coagulates on standing. In young and strumous patients, or at least chiefly in them, in whom the collection of fluid is not large, it is of the colour and consistence of whey, with shreds of lymph floating in it; and is undoubtedly the product of inflammatory action, modified by the constitutional disease we have mentioned, for where acute inflammation of the peritoneum terminates in similar effusion, it uniformly proves fatal: it is the product, therefore, of a slower inflammatory action than in acute cases.

"If clear serum, but deeply tinged with blood, follow the introduction of the trochar, we may be certain that a malignant growth of considerable size, (so large as to press upon the blood-vessels) often attached to the liver or ovarium, is the cause of the peritoneal dropsy. I am not to be understood to say, that when a large morbid growth in the abdomen, of the kind termed fungoid or malignant, proves fatal, accompanied by dropsy, that the serum is always bloody; but that this bloody serum, when it does occur, always depends on such morbid growth. In many cases in the hospital I have seen this remark verified, so that I believe it to be strictly correct." 93.

If the sudden disappearance of the fluid in anasarca was dangerous, it is also a harbinger of evil in ascites. In the latter, however, it is preceded by frequent and almost uncontrollable vomiting, or, if the water has been drawn off by tapping, and does not reaccumulate, violent pains in the bowels occur, accompanied with diarrhœa difficult to be restrained. Dr. Seymour has found in such cases, after death, the intestines of a deep leaden blue colour throughout their whole extent, and the omentum of the same colour. The peritoneal investment of the intestines is thickened and opaque, and sometimes shreds of lymph, not of very recent formation, adhere to the convolutions. There can, we presume, be little question that this blue colour is the result of congestion, insensibly gliding into low and chronic inflammation: the thickening and the lymph are sufficient evidence of that.

In some cases, and this is especially the result of repeated attacks of ague, or of residence in a pestiferous district, the liver and spleen become greatly

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enlarged. If the former is simply enlarged, without hardness, effusion into the abdomen may not follow—if enlarged and indurated, ascites, less considerable and less intractable than when dependent on a small hard liver, is the consequence. The familiar explanation of the enlargement of the liver and spleen after agues, is no doubt the true one. The reiterated congestions in the abdominal viscera occasioned by the cold fit, terminate in the morbid growth of those two organs, in which, from their anatomical structure, such congestion must be felt most sensibly.

"Fortunately, except under very aggravated circumstances, the effusion and its cause are removed, and the patient permanently cured, unless constantly exposed to the miasmata. Mercurial frictions have often a most extraordinary effect in this disease, reducing the swellings, and from their diuretic power carrying off the effused fluid at the same time. To these saline purgatives should be added; and it is remarkable that mineral waters possessing purgative qualities are often found in the neighbourhood of marshy districts, affording the ready means of relieving the diseases engendered by a sojourn in these unhealthy regions. The waters of St. Filippo, in Tuscany, are annually resorted to for this purpose: they resemble in some measure the waters of Harrowgate, often drunk in our country, to relieve the chronic diseases of the liver, contracted during a residence in India. The waters also of Monte Catini, near Pisa, are celebrated also in that country, whose marshy districts abound with ague, for the cure of visceral obstructions.

The practice also of letting fall a column of hot water on the affected part, under the name of *douche*, affords a very effectual method of reducing the swellings of the viscera. This practice in France and Italy, in such cases, is almost universal.

Modern discoveries also have afforded a most powerful agent in reducing these swellings, when of long standing, in the hydriodate of potass. Two or three grains of this salt, taken, dissolved in two or three ounces of water, twice daily, will sometimes succeed when other remedies fail: under its use the patient's strength and appetite will return, while the dropsical effusion subsides gradually, with an increased and limpid flow of urine. Of course, if the enlarged viscera be painful to the touch, it will be advisable to apply leeches repeatedly, before having recourse either to mercurial friction or the use of the hydriodate of potass. Where mineral waters cannot be obtained, the best saline medicines are the tartrate or supertartrate of potass, or the Rochelle salt (tart. pot. et sodæ), in the dose of from half an ounce to six drachms, every morning, dissolved in half a pint of water." 99.

There is reason to believe that iodine is applicable to the treatment of more cases of ascites, than that dependent on enlarged liver. We have seen it of great service, where there was no reason to believe that enlargement of the organ existed, in any material degree. The combination of the tincture of iodine with the hydriodate, appears to augment the powers of the remedy. Iodine, however, must be given cautiously, and never when there is a tendency to inflammatory action. Its primary effects are frequently stimulating, or, at least, it seems to induce, in some cases, inflammatory determinations. On the other hand, if injudiciously exhibited, it may suddenly depress, and occasion low fever from its effects upon the gastro-intestinal mucous membrane.

We must soon part from our able author, for we have arrived at the sixth chapter, the last of the original portion of the book. It treats of ascites from disease of the peritoneum, that is, from the tuberculated condition of

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it, described so well by Dr. Baron, of Cheltenham. The disease in question consists, in its early stages, of a pearly thickening of the peritoneum, the membrane being pushed up by numerous eminences, or tubercles deposited on the cellular side of the serous membrane; in more chronic cases, large masses of thick cheesy-looking matter are deposited on the cellular side of the omentum, sometimes distending it, like a bag, into an unequal globular tumor; at others, into a thick flat mass, compressing the intestines like a pad.

About thirteen years ago, Dr. Cholmeley, of Guy's Hospital, drew our author's attention to the case of a patient who vomited a peculiar deep leek-green coloured fluid, precisely resembling in tint the beautiful fluor spar, found at Alston, in Cumberland. Dr. Cholmeley stated that the patient in question laboured under the tuberculated state of the peritoneum, for whenever he had seen this vomiting, he had found on dissection that disease. So it turned out, and Dr. Seymour has since had many opportunities of confirming Dr. Cholmeley's remark. Yet he has not observed this peculiar vomiting when ascites has accompanied the tubercular accretions, probably (so he thinks) because the evacuation by vomiting prevents the serous effusion.

To return, then, to the ascites. It is always more scanty than when caused by hepatic disease. Two gallons would appear to be the utmost extent, whilst in some cases only a few pints are present. The fluid is more or less whey-coloured, and often mixed with shreds of lymph, a plain proof of its inflammatory character. It more frequently accompanies the universal thickening of the peritoneal covering of the bowels, than accretion of the omentum.

It is more common in young than in old persons, in females than in males. It occurs in strumous habits, and appears to arise from inflammation, modified by that constitutional state.

The pulse in such cases is weak and quick; the features pinched and sharp, and the tongue red and glazed, as if a hot iron had touched it; sometimes of still deeper red colour, with patches of aphthæ. There is always a sense of weight and distention in the abdomen, even where no ascites is present.

"I have observed that where effusion takes place, it often arises early in the disease; whereas, where the disease is fully established, and the prolongations of the serous membranes are formed into hard masses, it is more frequently absent, while peculiar and fatal vomiting relieves the obstructed circulation; and hence it is, I think, that I have seen several young patients rally, where the dropsy appeared early from this organic affection." 104.

If the treatment is too often unsuccessful, happily the disease is sufficiently uncommon to diminish our regret at the comparative impotence of medicine. Mercury is rarely advantageous—powerful purging is obviously unsafe—tapping is injurious, as a slight consideration of the cause of the effusion might lead us to suppose.

"If, when the physician is consulted, the pain on pressing the abdomen be severe, one bleeding from the arm will be necessary, or if the patient be weakly, a dozen leeches may be applied to the abdomen: further than this, antiphlogistic practice appears to be hurtful, and in many cases the practitioner is not consulted until the results of slow inflammation have been established; thus ren-

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dering depletion improper, as weakening the forces of the patient, without controlling the action which first produced the disease.

Frictions with the liniment hydrarg., morning and evening, are often attended with benefit, but it is on the use of the hydriodate of potass that I have been accustomed to rely, from finding the general health recover under its influence, and the effusion, hardness, and tightness of the abdomen, disappear in a remarkable manner. Two grains of this salt, given in a draught of equal parts of cinnamon water and common water, with a little syrup, may be administered for several weeks, twice in the day, with no other visible effect than the amendment of the patient's health, or if any visible effect is produced, it is slight diuresis: even during its employment, a few leeches may occasionally be applied with advantage where there is any pain on pressure: if restlessness and sleeplessness be present, five grains of the ext. conii may be given with each draught, in the form of pill." 106.

The aperient which our author has found to agree best has been the phosphate of soda, from half an ounce to six drachms of which may be given daily in a pint of beef tea. It is not disagreeable, and is borne well by the stomach, irritable as that commonly is.

Ascites is sometimes the consequence of other diseases, of a tumor for instance of the ovary, or of enlargement of it, capable of compressing the veins which form the vena portæ. In such a case the introduction of the trocar first draws off clear serum from the peritoneal sac, then ropy muco-albuminous fluid from the ovarian cyst. In these cases the recumbent posture and diuretic remedies will often relieve the ascites remarkably, and after a time the tumor may possibly shift its place, the injurious pressure may be removed, and the peritoneal effusion may recur no more.

It has been supposed that rupture of the thoracic duct may cause ascites—an improbable conjecture unsupported by actual examination. Nor is simple enlargement of the mesenteric glands succeeded by ascites. Marasmus is its usual effect, though ascites may ensue if the glands press upon the vena portæ, or if, as sometimes happens, the growth is accompanied with chronic scrophulous inflammation of the peritoneum.

Ascites is not so frequent a sequela of eruptive diseases as anasarca is. When it does occur, antiphlogistic remedies and saline purgatives are probably best adapted for its early stage, and in its latter ones, it has been cured by the infusion of the pyrola umbellata, whilst the spartium scoparium, and the infusion of the root of the ononis spinosa have been recommended for it.

This concludes Dr. Seymour's own portion of the volume. The remainder is a translation of Geromini's work. As that is rather a history of dropsy than a practical account of the disorder, it is not adapted for our present purpose. Yet there is much in it that deserves perusal, and we shall take care, at an early opportunity, to lay a sketch of it before our readers. It seems scarcely necessary to pronounce a formal opinion on the matter contributed by Dr. Seymour. We have presented it in a complete and close analysis, and we think there can be no doubt that *that* amply bears out the favourable sentiments we expressed at the commencement of our notice of it. We need not add that the author is a physician of high practical attainments, who has laid before the public, in an unaffected manner, the results of accurate observation and of considerable experience.

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The Factory System and Factory Statistics.

The Quarterly Review, for the present month,* contains an article on the factory system, founded on as many as nine distinct reports or works published on that important subject. Of the nine documents, three are official, and the result of the labours of Commissioners of the King, or of Committees of the House of Commons. Two are productions of medical men, Dr. Kay and Mr. Charles Wing. Two emanate from Members of the House of Commons—the late Mr. Sadler and Mr. Fielden. And two are anonymous; one of these, termed "A Voice from the Factories," being in verse. All prove the interest taken by the public, the profession, and the legislature, in a system which involves the well-being of body and of mind, the happiness and lives, to say nothing of the eternal welfare, of many millions of our fellow-creatures.

There are two points of view in which we must look at the factory system —a political one and a medical. The political question is, no doubt, beset with many difficulties, and the economists are far from agreed upon it. Humanity revolts at the forced and unnatural labour of children: but they exist in numbers which, without such means of employment, could not possibly procure the necessaries of life. This very system has called them into being, and without it England could not sustain her enormous manufacturing population.

As medical men, we may discard the considerations of political economy, and examine the factory system as one affecting the public health. Our opinions have been asked by the Legislature and the community, and both have referred to us as the most appropriate judges, on one point at least of the issue. We have been appealed to, as philosophers and as philanthropists, by the friends of the factory child, and our feelings have been enlisted in the cause of the seemingly oppressed. If some of us have allowed our judgment to be a little warped by compassion, and have become partizans rather than umpires, the ancient and honourable character of the profession for humanity has been maintained, and the sin committed on *its* side must be deemed a venial one.

In the present short notice of the influence of the factories on health, we do not intend to discuss the whole question, but simply to exhibit a few of the facts. At a future opportunity we may consider it more fully. In this instance, we shall content ourselves with making use of the data, supplied by the industry and zeal of our contemporary.

A slight sketch of the history of factory labour may not be unacceptable. While it shews the unrelenting inhumanity of avarice, it displays the difficulties with which philanthropy and benevolence must struggle, before they can effect their noble ends. The system of employing children as factory labourers was the result of Arkwright's inventions. His looms took manufacturers out of the cottages and farm-houses, and assembled them in the counties of Derbyshire, Nottinghamshire, and more particularly in Lanca-

* December, 1836.

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shire, where the machinery was used in large factories, built on the sides of streams capable of turning the water-wheel. There was an immediate demand for hands, and children were found to be best adapted for the work. The custom instantly sprang up of procuring apprentices from the different parish workhouses of London, Birmingham, and elsewhere. Many thousands of children, between the ages of seven and of fourteen years, were carted to the North. The horrors of this apprentice-system appear to have been dreadful. But it is past, and we need not rake them up again. But one fact may be stated. An agreement was made between a London parish and a Lancashire manufacturer, stipulating that, with every twenty sound children, one idiot should be taken!

The toil, the scourging, the crowding, the filth of the receptacles for the apprentices, reached such a height, that these outrages on nature were taken in hand by Nature herself, and pestilential fevers became alarmingly destructive. The public was roused, and a board of health was instituted at Manchester, and made its report in 1796. That report was highly damnatory of the factory system.

In 1802, the late Sir Robert Peel introduced and carried his first bill for the Relief of the Apprentices. It did relieve them, but steam being now applied to manufactures, the site of factories was removed from the sides of streams to towns and populous districts, where labour could be readily obtained, and where apprentices were an useless incumbrance. The bill afforded no protection for the children now employed, and, in 1815, Sir Robert proposed a second measure, which was not carried till the Session of 1819. Sir Robert had limited the hours of actual labour to eleven, for all persons between the ages of nine and sixteen. The Commons would not hear of eleven hours as an ultimatum, and extended the number to twelve.

It is worth while to pause for an instant, and listen to some of the medical evidence adduced by the master-manufacturers, in defence of an extended period of labour. To say the least of it, it is neither calculated to increase the public estimation of the logic, the candour, or the humanity of the profession. Fortunately, they who gave such evidence as we shall quote were few, and, both in numbers and in character, the medical advocates of moderate labour exceeded them.

"Edward Hulme, M.D. of Manchester.—*Q.* Suppose I were to ask you, whether you thought it *injurious to a child to be kept standing three-and-twenty hours out of the four-and-twenty*, should you not think it must necessarily be injurious to the health, without any fact to rest upon, as a simple proposition put to a gentleman in the medical profession? *A.* Before I answered that question I should wish to have an examination, to see how the case stood.—*Q.* Would it be injurious to a child, in your judgment, as a medical man, if, at the time he got his meals, he was still kept engaged in the employment he was about? *A. Those* are questions *which I find a great difficulty in answering*"!!

Q. I ask you, as a medical man, whether, supposing a person, during the time he was eating his meals, was employed in manual labour, is it your judgment that the food will be as nutritious to him as it would be if he were unemployed? *A.* I should imagine that the food would be equally nutritious to him, *if he did the manual labour of handling his knife and fork*"!!!

It does appear marvellous how any physician, surgeon, or apothecary could make such answers to such questions. Dr. Hulme could not determine, as an abstract proposition, whether standing twenty-three hours out

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of the twenty-four, would or would not be prejudicial to the health of a child! He wished to examine how the case stood! He must have been indeed a lover of the Baconian method. The replies are absolutely farcical.

"Mr. Ainsworth, surgeon.—Can a child from six years of age to twelve be employed from thirteen to fifteen hours daily in a temperature of 80°, and in an erect position, consistently with safety to its constitution? I never saw an instance of the kind as a fact brought before me, and therefore cannot say.—Am I to understand you, *as a medical man*, can *give no opinion*, whether it would not be more exhausting to the human body to keep in *an erect position* for twelve hours, than in a *reclining* position? *I have no facts to lead me to conclude.*

Thomas Turner, surgeon.—Do you think it would benefit a child's health of eight years old to be kept twelve hours upon his legs? *Really I am not prepared to answer that question.*—What do you think of it? I really cannot tell you.—You can form no opinion, whether to a child of eight years of age being kept standing fourteen hours without intermission would be injurious to his health or not? I have no facts to guide me." 404.

It would be idle to expatiate on the character of such testimony as this. We hope we may have no more of it. Medical men are notoriously bad witnesses, but evidence of the nature we have quoted is more than usually absurd. Whilst some gentlemen experienced such extreme difficulty in determining whether factory labour was injurious—whilst Dr. Hulme thought work during meals wholesome provided the knife and fork were worked too,—while Mr. Ainsworth was unable to decide whether standing for twelve hours was more exhausting than lying down—and while Mr. Turner really could not tell if he thought or did not think that the health of a child of eight years old would be benefited by his being twelve hours on his legs—the actual nature of the factory-labour was as follows:—

It was in nearly all the cotton-mills of Lancashire and its neighbourhood, excepting Saturday, from thirteen to sixteen hours a day, inclusive of one hour, or less, *nominally* allowed for dinner. Many of those subjected to such labour were children of nine, eight, seven, and six years of age, and previously to the stirring of the investigation, under six, and, in some instances, *under five!* The children continued constantly at work so long as the machinery was in motion, during which time they were not permitted to sit down or to leave the factory. They often complained (naturally enough, our readers will think) of fatigue, and aching limbs; in this state of exhaustion, towards the close of the day, they were beaten by the spinners, or overlookers, or even by their own parents, that blows might supply the deficiency of strength. In most cotton-factories, during the greater part, and often the whole of the time *nominally* allotted for dinner, the children were occupied in cleaning the machinery; no time was allowed for the breakfast or afternoon meals, which were snatched in mouthfuls during the progress of uninterrupted labour; the refreshment not unfrequently remaining untouched till it became cold, and covered with dust and dirt from the cotton-flyings. It appeared, moreover, that the temperature in many cotton-mills was from 75° to 80°, in others from 80° to 85°, and occasionally as high as 90°.

Such was the state of things when, in 1819, the twelve hours' Bill was carried. After the lapse of a few years, Sir John Hobhouse introduced an eleven hours' Bill, which was burked. He obtained, however, an Act in 1825, which limited the labour of persons under sixteen to sixty-nine hours in the

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week, twelve on five days and nine on Saturdays. But his bill comprised the cotton-factories only. In 1831 it was somewhat improved by the prohibition of night-work for all under twenty-one, and by the advance of the ages entitled to protection from sixteen to eighteen years. It is obvious that while something had been gained, humanity had yet much to effect, before she could be satisfied. Mr. Sadler, a very eloquent and a very earnest advocate of the cause of the factory-child, first appealed to the country in 1831, and brought in his Bill in the ensuing Session. The measure was cushioned, and Mr. Sadler never was in Parliament again. A Committee, which was appointed on the introduction of the Bill, elicited a mass of evidence, which attracted the attention, and greatly excited the feelings of the public. A Commission was now appointed by the Crown, and the Commissioners, four of them medical, were directed to investigate personally and systematically the condition of the children. Their Report was presented to the House of Commons in July, 1833. In March of that year, Lord Ashley had moved the first reading of a Bill, resembling in all essential particulars, that of Mr. Sadler. It sought to restrict the labour to a period of ten hours, for all ages from nine to eighteen. The second reading of the Bill was postponed until after the presentment of the Report, which, as we have observed, was in July. The Report, in question, recommended eight hours as the ultimatum of labour for young children, and on that recommendation was based the law which is now in operation. The law in question, Lord Ashley's proposition being superseded, enacts:—

A period of eight hours for all under thirteen, and one of twelve for those between thirteen and eighteen. By a clause, it was provided that the Act should come into operation by parts, each in succession. At the end of six months, children under eleven were to enjoy the benefit of the eight hours' limitation; at the end of eighteen, all under twelve; and at the end of thirty, all under thirteen. Subsequently, the Ministry endeavoured to vitiate the Act, but met with a defeat, and it is at present the law of the land. There is every reason, however, for believing that a ten hours' Bill for all ages will at no great distance of time be introduced, and as medical evidence has throughout been properly depended on as the basis of any legislative enactments, we have laid before our readers this sketch of the history of the various measures that have been attempted or adopted.

It only remains for us to notice some of the facts adduced, to shew the actual working of the factory system.

Dr. Ray, in a pamphlet, intituled, "The Moral and Physical Condition of the Working Classes employed in the Cotton Manufacture in Manchester," after presenting an elaborate survey of the streets, and the houses inhabited by the operatives—and after painting in the darkest colours the imperfect ventilation and the filth of all, introduces us to the person and the family of a cotton-spinner. Let us accompany the Doctor down a lane containing "heaps of refuse, deep ruts, stagnant pools, ordure, &c." and opening the door of what is facetiously called a house, let us gaze upon the inmates:—

"The population employed in the cotton-factories," continues the Doctor, "rises at five o'clock in the morning; works in the mills from six till eight o'clock, and returns home for half an hour or forty minutes, to breakfast. This meal generally consists of tea or coffee, with a little bread. Oatmeal porridge is

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sometimes, but of late, rarely used, and chiefly by the men; but the stimulus of tea is preferred, and especially by the women. The tea is almost always of a bad, and sometimes of a deleterious quality; the infusion is weak, and little or no milk is added. The operatives return to the mills and workshops until twelve o'clock, when an hour is allowed for dinner.

Amongst those who obtain the lower rates of wages, this meal generally consists of boiled potatoes. The mess of potatoes is put into one large dish; melted lard and butter are poured upon them, and a few pieces of fried fat bacon, are sometimes mingled with them, and but seldom a little meat. Those who obtain better wages, or families whose aggregate income is larger, add a greater proportion of animal food to this meal, at least three times in the week; but the quantity consumed by the labouring population is not great. The family sits round the table, and each rapidly appropriates his portion on a plate, or, they all plunge their spoons into the dish, and with an animal eagerness satisfy the cravings of their appetite. At the expiration of the hour, they are all again employed in the workshops or mills, where they generally again indulge in the use of tea, often mingled with spirits, accompanied by a little bread. Oatmeal or potatoes are, however, taken by some, a second time in the evening." 420.

During twelve hours of the day, the operative drudges, in a heated atmosphere, watching the movements, and assisting the operations of a steam engine. His toil is incessant, and rational relaxation he can have none, because, when the hours of work are over, bodily fatigue precludes every thing save indulgence in spirits, in the grossest sensuality, or in the indolence of mere exhaustion. What wonder then, that the factory labourers have become as a class degenerate in body—debased in mind—a grovelling, gin-drinking, demoralized set, whose animal vices are painted in the most revolting hues by those who have narrowly watched their habits. We have not room for the statements of Dr. Kay and of Mr. Gregg on this head, nor do they so much concern us, as the merely physical effects of labour.

It appears that the whole number of persons employed in cotton-factories in the year 1835, was 220,134, four-times as many as in 1818. Of that number, 94,287 were between the ages of eight and eighteen years—and 125,877, above the latter age.

It is singular to observe the effects of the improvements in machinery on the labour of the operatives. It will be remembered that in 1819, the Legislature declared that twelve hours of mill-work were sufficient. The following calculation serves to exhibit the amount of labour undergone when that enactment was carried.

'A table shewing the distance over which a piecer had to travel, in following a pair of mules spinning cotton-yarn of Nos. 40, in the year 1815.

The spinner put up 820 stretches daily, on each of 2 mules, 12 yards long each, and was attended by 3 persons.	Number of stretches daily.	Number of yards from mule to mule.	Number of yards comprising the piecer's work along each mule, and over which he must walk each stretch.	Total Number of yards.	Distance in miles.
	1640	5	4	14,760	8 and a fraction.'

The operation of the bill would appear to have done any thing but diminish the spinner's toil. The ingenuity of cupidity travelled faster than the legislation of humanity, as the next statement will demonstrate.

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'A table shewing the distance over which a child must walk, in following a pair of mules spinning cotton-yarn of No. 40, at Manchester, in 1832.

The spinner puts up daily 2900 stretches on each of 2 mules.	Number of stretches daily.	Number of yards from mule to mule.	Average number of yards which a child walks along each mule per stretch.	Total Number of yards daily.	Distance in miles.
	4400	5	3	35,200	20.'

At Bolton-le-Moors, the wheels would appear to revolve with still more astonishing rapidity, and it is estimated that a piecer, in attending a pair of mules spinning cotton-yarn, must there travel daily twenty-five miles! All this is done in a heated and impure atmosphere, by persons indifferently fed—an irksome daily drudgery, performed under the stimulus of absolute necessity. That the lower classes in a manufacturing country, or indeed in any, must either work or starve is true, and an exaggerated and preposterous compassion may be entertained on their behalf. But where the numbers of the labourers are such that the competition among them resulting from necessity, disables them from defending themselves against the exactions and tyranny of capital, both humanity and policy demand the interference of the nation, and the effectual protection of Parliament.

If such reasoning is applicable to the case of adults, how much more forcibly must it apply to children—to those helpless creatures consigned by inhuman parents to almost as inhuman overlookers—who are made to taste the most sickening toil and care at the only age which nature has intended to be free from them. We cannot effect the Utopian project of releasing the poor man's child from labour, but we can and we ought to make that consistent with the powers of childhood. As medical philosophers we are called on to determine what those powers are, and what amount of work is consistent with the integrity of the infantile constitution. As medical practitioners we have been summoned to report, and probably we shall be summoned again, on the actual results of the existing system. The evidence that we have given has not always been calculated to exhibit either our candour, our science, or our good feelings, and we may be sure that the intelligent portion of the public both remarks and remembers these disadvantageous exhibitions.

It seems that the tendency of the factory system is to substitute more and more exclusively, the labour of the young for that of the adult. There are many apparently good reasons for this, on which, however, we need not insist, as the fact is all we want. The consequence is, that the old are thrown on the young for support, the reverse of the order of nature. A sad picture has been drawn by too many observers of the subsistence of parents on offspring. That, however, is a consideration which belongs to the moral, rather than the medical philosopher, and we dismiss it. It concerns us more to hear that—

"The number of operatives above the age of forty is incredibly small. We must refer our readers to a curious but authentic document, arranged about the year 1831, during a great 'turn out,' from forty-two mills in Mosley, Ashton, Staley-Bridge, and Dukinfield, of 1665 persons, whose ages ranged from fifteen to sixty. Of these 1584 were below forty-five; *three* only had attained a period

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between fifty-five and sixty; and not more than fifty-one between forty-five and fifty were counted, as fit for work! Mr. M'Nish, a witness entitled to the utmost credit, even by the admission of the Commissioners, and in truth, as every one must perceive upon reading his evidence, a man of singular sagacity, deposed, in the year 1832, that, by actual enumeration of 1600 men in the factories of Renfrew and Lanark, he ascertained that not more than ten had reached forty-five years of age, and these, he added, were retained by the special indulgence and humanity of their masters. The spinners at that period are so broken down that they cannot produce the required quantity. 'Their eye-sight fails,' and then they are turned off, and younger men employed."

We now quit this subject. We have drawn the attention of our readers to it, because it is evidently still unsettled, and will again occupy the attention of the Legislature. Medical evidence may once more be requisite, and it is well for the profession to be put in possession of the general facts, which will enable it to form a more comprehensive and more accurate estimate, of the various bearings of the question at issue. Independently of this, which may be said to be in some measure a personal consideration, it is daily becoming more indispensable for the medical practitioner to be well informed, on matters which affect the health of large sections of the nation. His opinions are frequently publicly asked, and if inconsiderately or ignorantly expressed, they redound to his own disgrace, and to the shame of the profession.

On the Disease of the Hip Joint: with plain and coloured Plates. By *William Coulson*, Consulting Surgeon to the London Lying-in-Hospital; late Surgeon to the General Dispensary, &c. &c. 4to. pp. 111. 5 plates.

Mr. Coulson is known to the profession as the editor of the English translation of Blumenbach's Manual of Comparative Anatomy—to the public as the author of a very sensible work on deformities of the chest—to his friends as an industrious and intelligent surgeon. Formerly engaged in the honourable occupation of teaching human anatomy, necessarily acquainted with the interesting and instructive mass of facts which comparative anatomy presents, he brings to the investigation of disease a mind educated in the proper manner.

It might almost seem hopeless to attempt discovery in the pathology or in the treatment of diseases of the joints—diseases which have been studied by many able men, with the assistance of those lights which modern pathology and morbid anatomy afford. Yet omissions are made by the most accurate, fallacies creep into the observations of the most cautious and the most acute, and perhaps there is no disease within the pale of medicine or of surgery, on which additional inestigations will be expended quite in vain.

The affections of the hip-joint are confessedly obscure, and there has been some difference of opinion with respect to them. What may be called the "haute pathologie," of all the joints is yet unsettled, and recent attempts, it is well known, have been made, to disturb what were considered unassailable

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opinions. M. Coulson, then, need offer no apology for inquiring where inquiry would seem to have become requisite, nor for publishing the results of investigations, provided they have been pursued with care and reported with accuracy.

The work contains seven chapters, severally headed:—The anatomy and physiology of the hip-joint. The cause of the disease of the hip-joint. The pathology of the hip-joint. The morbid anatomy of the hip-joint in this disease. The symptoms of the disease of the hip-joint. The diseases with which that of the hip-joint may be confounded. The treatment of disease of the hip-joint.

It is unnecessary for us to do more than lay before our readers those remarks of our author which present us with new facts, or which view old ones in a new light; in short, it is only necessary to allude to what wears in some degree or other the garb of novelty. We may therefore entirely dismiss the first chapter, which discusses the anatomy and physiology of the hip-joint. The second, exposes the views of Mr. Coulson on the cause of the complaint, and as his views are in some measure peculiar, we must pause in order to exhibit them.

According to our author, disease of the hip-joint is essentially an affection of the secreting system. His principal reasons for this opinion may be readily summed up:—the disease is avowedly rather constitutional than local, and is frequently associated with scrofula—it is almost universally attended with affection of the liver—it may give rise to dropsy—and, finally, the most successful treatment operates by promoting absorption, as iodine. Children are certainly more subject to disease of the hip-joint than adults, and, perhaps, females are more liable to it than males. Now Mr. Coulson argues, that in both, the loco-motive system being weak, and the secreting powerful, the excess or derangement of the former overpowers the latter, and the hip-joint becomes a sacrifice. The view is ingenious, but it must be owned to be rather hypothetical. We need not follow it out in detail, nor apply it, as our author has done to the explanation of some well-known circumstances connected with the causes of the malady.

The pathology of the hip-joint is treated of in the third chapter, and the diligence of Mr. Coulson is displayed in his view of the opinions of his predecessors. Mr. Coulson is of opinion that the disease is essentially seated in the synovial membrane.

"The true local cause of the disease (conforming perfectly to the doctrine I have ventured to adduce, namely, that the disease is really a constitutional one,—that it is a disease of secretion,—and that it originates in the part of the joint most vascular and most liable to disease) is pointed out by Camper and Van Swieten, who attribute its origin to an unusual collection of synovia.

Petit is also of opinion that, in addition to relaxation of the ligaments of the joint, paralysis of the muscles and swelling of the head of the bone, it may arise from a collection of synovia.

That the synovial membrane of the hip-joint, and not the cartilage, is often primarily engaged in this disease, we may infer from one of the first symptoms which marks its commencement, a fulness of the groin, depending in all probability upon the increased secretion into the joint, similar to that which we know takes place in synovitis of the knee." 32.

In illustration of this view he relates a case. It was that of a child twenty

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months old, first seen by Mr. Coulson in April, 1836. There were then wasting of the right nates, and apparent elongation of that limb. The disease went on, and the child died in June. Setting aside other less important particulars, on opening the capsular ligament, some thick yellowish matter escaped, resembling, in consistence, the cortical substance of the brain. The quantity amounted to half a table spoonful. The round ligament was completely destroyed, and the synovial membrane inflamed.—There was absorption of some portion of the cartilage covering the head of the femur, and of the cartilaginous rim of the acetabulum; but on making a section of the femur, the bone was found healthy, and the cartilage no further diseased.

"I may mention another case which confirms the view I have taken of the origin of the disease.—With my friend Dr. Lambe, I had some time ago an opportunity of examining the body of a child six years old, who died of an inflammatory affection of the lungs, but who, at the time this illness commenced, was labouring under incipient disease of the right hip-joint. The synovial membrane was inflamed, particularly that part investing the round ligament; the red vessels extended along the ligament over the cartilage of the head of the femur; and I know of nothing with which I can so well compare the appearance of the cartilage as the conjunctival membrane of the eye in a state of incipient inflammation." 36.

The consideration of the pathology leads to that of the morbid anatomy of the hip-joint. We need not dwell on the ulceration of the cartilages, the affection of the bone, the thickening or ulceration of the capsule, the abscesses, the sinuses, nor on consecutive dislocation of the head of the femur. But we may mention the changes which ensue, when the curative process has begun, as, probably, they are less familiar than the rest. Mr. Coulson observes, that the ligaments are found, in some instances, thicker than usual, with a soft substance, which seems to have been first thrown out as coagulable lymph, but now forms a solid and organized mass, adhering to a greater or lesser portion of their internal surface; and in cases where the articular cartilages have been absorbed, this substance is found to pass between the surfaces, which when covered with cartilage moved on each other, and now to unite them by adhering to, and receiving vessels from, each; thus forming the connecting medium through which anchylosis takes place. If the capsular ligament be not destroyed, the carious head or neck of the bone is drawn towards the acetabulum, and dislocation usually does not take place. Anchylosis of the head of the bone in this situation takes place. At other times, the head of the femur is dislocated; and anchylosis takes place between the femur and dorsum of the ilium or a new joint may be formed here, and a certain degree of motion be allowed. When the head of the bone is dislocated, ossific deposit is thrown out in the acetabulum, which in time becomes almost obliterated.

The change which the bones of the pelvis undergo, has been studied and described by Albers and Rust, from whom our author has transcribed it. With this also our readers are probably unacquainted, and we shall quote the passage that portrays it.

"The pelvis, in those who have for a long time gone lame, is pushed upwards; and the sacrum is flat and straight: in a few cases, however, it is more curved than in the natural state. The coccyx is bent strongly forwards, and

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the connection of the last lumbar vertebra with the sacrum forms a right angle. The ilium of the affected side stands higher, and has, in general, a perpendicular direction, and more of a triangular form. The external surface is smooth, whilst the fossa appears more hollowed than usual. This hollowing probably depends on the action of the iliacus internus, which is greater than that of the glutæi. The horizontal portion of the pubes often seems lengthened, and lower than in the natural state, and the ischium is usually drawn outwards and forwards. The perpendicular direction of the foramen ovale is changed more to a horizontal one, and the opening assumes more of a triangular form, its base being turned to the acetabulum. In consequence of the changed situation of the bones of the pelvis, its different diameters undergo an essential deviation from the natural state. The superior apertures of the pelvis are commonly somewhat oblique: and the pelvis is broader on the affected side from before backwards.

Dissections of those persons who have walked lame for a long time in consequence of this complaint, show, that the muscles have been exercised in a different direction from the natural one. Some are relaxed, particularly the three glutæi, which are quite drawn together and shortened. In addition, the anterior part of the glutæus medius and minimus is drawn backward, and the back part is pressed, in an almost straight direction, on the trochanter. Other muscles are drawn forward with the dislocated limb, as the obturators. The gemini, the pyriformis, and quadratus, become shortened, as the femur is drawn nearer to their attachment. Other muscles, from similar causes, are drawn inwards; and this is the case with the psoas and iliacus internus. The triceps, gracilis, and pectinæus are drawn outwards. Under the tendon of the rectus femoris, which is drawn backwards, the head of the femur ascends. Sometimes several muscles are found entirely hardened by the preceding suppuration, joined together, and converted into one tendinous mass. The sciatic and crural nerves are found on the stretch or pushed to one side. Sir B. Brodie mentions a case in which he found two enlarged lymphatic glands, each of the size of a walnut, immediately below the crural arch, on the fore part of the joint; and these lay in contact with, and immediately behind, two branches of the nerves, so as to keep the latter on the stretch, like the strings passing over the bridge of a violin. The hip, therefore, of the affected side is much less prominent, or rather, is much flatter than the other, and is often intersected by sinuses discharging very fetid purulent matter." 44.

Mr. Coulson dwells, of course, on the symptoms of this disease, symptoms at times obscure, physiologically interesting, but too familiar, from the many excellent accounts which have been given of them, to permit us to speak of them at any length. Yet as our author offers a new explanation of that symptom, which has always attracted the attention, and indeed excited the curiosity of surgeons, we think we may advert to it. We allude to the pain in the knee, which is frequently, though not always, felt in the early stages of hip-disease. It is commonly supposed to depend on the inflammation of the capsule, affecting the anterior crural nerve which lies upon it. Sir C. Bell has attributed the phenomenon to implication of the obturator nerve, which sends a twig or two into the hip joint, and is finally distributed upon the inside of the thigh. Mr. Coulson hints another opinion.

"It has struck me," he remarks, "that, from the intimate connection of the long head of the rectus femoris with the outer edge of the acetabulum, and with the capsular ligament, this muscle may take on the inflammatory action, and the pain in this way be conveyed down the limb to the thigh. We find something

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analogous to this in diseases of the shoulder-joint: the pain in these cases extends down the front of the arm to the insertion of the biceps, and the long head of the biceps is in intimate connection with the capsular ligament of the joint, and the glenoid ligament of the scapula." 48.

It appears to be an objection to this view, that we know of no reason why inflammation at the origin of a muscle, should cause pain at its insertion. We are not aware of any facts which establish such a general law. But irritation or inflammation of a nerve at its source, or in its course, does, it is well known, occasion pain to be referred to its cutaneous terminations, and occasionally, though rarely, to its origin. The case of inflammation of the testicle offers an illustration of both these facts; it is not uncommon for the patient to feel pain on the surface of the hip, *and* in the loins. The pain in the hip is seated in the cutaneous ramifications of the lumbar nerves in connexion with the spermatic: and the pain in the loins is at the origin of the spermatic nerves themselves. In the cases we have seen of disease of the shoulder-joint, the pain has either been referred to the inner side of the elbow, in the course of the internal cutaneous nerves, or has been felt apparently in the bone itself.

Passing over the *apparent* lengthening of the limb affected, which is well known to occur early in the disease, and merely glancing at the most usual cause of the *real* shortening which occurs in the later stages, we allude to consecutive dislocation of the head of the femur on the dorsum of the ilium, we may observe that this shortening *may* be independent of any dislocation whatever.

"The real shortening often occurs without dislocation of the femur having taken place. A case of this kind occurred to me, some time ago, in the General Dispensary. A girl of the name of Dexter, who had been for a long time under my care, died with disease of the hip in the most advanced stage; there was shortening of the limb, prominence of the nates, and abscesses in the neighbourhood of the joint. All these symptoms led me to conclude, that there was dislocation of the head of the femur; but, on carefully examining the joint after death, I found the capsular ligament entire, and no dislocation. The head of the bone, and a great part of the neck, had been destroyed by caries, and in this way the shortening was produced without dislocation." 58.

We have seen two instances of shortening of the limb, occasioned in another manner. The head of the femur was partly destroyed by ulceration, and the bottom of the acetabulum was removed by the same process. What remained of the head and neck of the bone had passed through the aperture at the bottom of that cavity, and had consequently entered the pelvis.

Dislocation of the head of the bone has occurred into the ischiatic notch. Such a case is mentioned by Mr. Earle. In a preparation in the Museum of the College of Surgeons, the head of the femur is dislocated into the foramen ovale. Boyer relates a case of this sort. Sir Benjamin Brodie alludes to another. The following is an outline of a case which occurred to Mr. Hides, of Emsworth.

Case. "Master S., æt. nine years, in 1826 laboured under a severe affection of the hip, accompanied with great constitutional irritation. Matter formed in front of the joint, for the evacuation of which an opening was made. The

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wound continued to discharge for a long time, and pieces of bone occasionally came away. In the middle of August 1829, the child had a fresh attack of the disease of the joint. On the 8th of October he was examined by Mr. Hicks, who found the limb much elongated, the knee and foot turned outwards, and the head of the femur near, or in, the foramen ovale. By counter-irritants, rest, and attention to the general health, the complaint in the hip was arrested, and the child restored to perfect health: the deformity, of course, remains. The nates, which were flat, or even flabby, are now become rounded or prominent, and swollen, and the toes are turned inwards." 61.

The sixth chapter is occupied with a consideration of the cases of other diseases which may be confounded with disease of the hip. They are, congenital displacement of the hip-joint—congenital mal-position of the acetabula, usually caused by rickets—unnatural shortness of the psoas and the internal iliac muscles?—unequal length of the two lower limbs—necrosis of the upper end of the femur—deep-seated abscess in the groin—psoas abscess—malignant tumor situated over the trochanter major—inflammation and effusion in the bursa placed between the tendon of the iliacus and psoas, and the capsule of the hip-joint—disease of the sacro-iliac synchondrosis—caries of the spine—sciatica—an affection of the hip occurring about the period of dentition—nervous affection of the hip in hysterical females.

In most of these cases an accurate diagnosis can only result from an accurate knowledge of the various diseases which simulate that of the hip. But we will advert to one or two of the former.

1. Mr. Coulson properly observes that the diagnostic marks between psoas abscess and the disease of the hip-joint have been thus arranged:—First, in psoas abscess, the patient complains of violent or dull pain in the region of the loins, which is very much increased in the upright posture of the body, and every motion of the limb, particularly on extending it: in the diseased hip, there is no fixed pain in the loins; it is felt more in the neighbourhood of the hip, and especially in the knee. Secondly, in psoas abscess, during the whole course of the complaint, there is no deviation to be perceived in the natural situation of the trochanter, and no difference in the length of both limbs; in diseased hip, on the contrary, this is always the case. Thirdly, in the affection of the psoas muscle, the patient cannot turn the foot of the affected side outwards, without increasing the pain: in diseased hip, on the contrary, the foot is generally turned outwards. Fourthly, on taking a deep inspiration, on coughing, crying, and in the erect posture of the body, the fluctuating swelling either on the nates or on the front of the thigh increases, and the exit of the matter, if the abscess be burst or opened, will be facilitated: in abscess of the hip-joint from disease, neither is the case.

We would observe that these diagnostic symptoms are not always sufficient to enable us to discriminate the two diseases. In cases of disease of the lumbar vertebræ, or of what is usually the same thing, psoas abscess, prior to the appearance of suppuration externally, the patient occasionally complains of lameness, and of pain in one hip. Nay, he will do what we are assured he never does—he will display apparent elongation of the limb which is the seat of suffering. Probably the pain in the hip is occasioned by inflammation at the root of the anterior crural nerve, where it lies in the psoas muscle—the lameness has perhaps a similar cause—and the apparent

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elongation of the limb results from the patient *favouring* it, as he does when the hip-joint itself is affected.

We lately had a gentleman under our care, in whom these symptoms existed. Yet when we forcibly pressed the head of the femur into the socket no pain was occasioned, and we suspected that the joint was not diseased. We made the patient flex the thigh by his own effort—he felt pain in the groin. We extended the thigh on the pelvis by force—he had pain in the groin and in the hip. We elongated the limb—he had pain. This led us to think, for physiological reasons that cannot but be obvious, that the mischief was in the lumbar vertebræ, or in the psoas muscle. We therefore made a careful examination of the back, and discovered slight tenderness on pressure in the lumbar region. We expressed our opinion that the disease was there, and so it finally turned out—for, many months afterwards, an abscess presented at the side of the upper lumbar vertebræ.

2. In an affection, says our author, rarely occurring, namely, inflammation and suppuration in the bursa, beneath the conjoined tendons of the psoas and iliacus, it is observed, that besides the absence of acute pain on jarring the articular surfaces, by compression at the sole of the foot, if we cause the patient to lie on his belly, we do not see that flattening of the buttock, and prominence of the trochanter, so characteristic of hip-joint disease.

We lately had a case of this kind under our care. A very excellent surgeon residing in Arundel, Mr. Fletcher, having suffered much from rheumatism, and being afflicted with much pain in the right hip and with lameness, was pronounced by some of his medical friends, at Chichester, to labour under disease of the joint. He came to town, and we examined the hip very carefully. The nates were wasted—there was apparent shortening of the limb—and there was pain on walking and on moving the articulation. A more particular investigation shewed that there was no pain on pressing the articulating surfaces together, whilst there was pain on pulling at the limb, on twisting the capsule, or on forcibly extending the limb on the pelvis. In front of the joint, in the situation of the tendon of the psoas and iliacus, there was a perceptible thickening, and some tenderness on pressure. We concluded that the disease was chronic rheumatic inflammation of the bursa under the tendon in question, and probably of the fibrous tissues in the neighbourhood. We had the pleasure of meeting Sir Benjamin Brodie on the case, and he took a similar view of it. The progress of the complaint has amply proved that the joint was sound.

3. Mr. Coulson observes that a mother may bring to a surgeon a child with supposed disease of the hip: on inquiry, he learns that the child could walk at the usual period, but that, when eighteen or twenty months old (or even at an earlier age), he was unable to stand, and that the child was at this time cutting the teeth. On examination of the limb, we find it wasted, the nates of the affected side flat, and the limb, if there be any difference, a little longer than the sound one. When the child attempts to walk, it cannot raise the limb from the ground, but draws it along; and when it stands, the weight of the whole body is rested on the sound limb, whilst the limb of the affected side is half bent.

The diagnostic mark of this disease is the absence of any pain in the joint. If we place the child on the table, and press in the neighbourhood of the

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joint, or rotate the head of the femur, no pain is produced: whereas, in disease of the hip, the pain would be great. Some years commonly elapse before the child recovers the use of the limb, but after the period of dentition, the general health suffers little from the disorder. It is a pity that we have not the information which dissection might give us on its nature.

The last chapter is naturally dedicated to the important subject of treatment—that subject which as certainly forms the conclusion of a medical treatise, as a marriage does of a novel. Perhaps they are often equally happy.

Mr. Coulson first adverts to the treatment of the more simple and acute cases of inflammation of the hip-joint, and then to the management of that usually constitutional form, which has been emphatically though loosely termed the "morbus coxarius." On the former head we need say nothing, on the latter, we may introduce a remark or two.

1. In this, as in many other forms of constitutional disease, we find that pure air, and especially that of the sea-side, will often do more than medicine or the surgeon. The stage of this disease adapted for the removal of the patient to the country, is not that in which there is acute inflammatory action, or in which matter is forming. It is when the symptoms are moderate, and disposed to be chronic. Warm salt water bathing usually agrees. The season for the sea-side is, of course, the Summer—from the beginning of May to the end of October, provided the cold weather does not set in earlier. Dr. Brown told Mr. C. that, when the cold sets in, the strumous sores assume, in all cases, a very unhealthy, and in some cases a sloughy, appearance. The plan adopted at the infirmary is as follows:—The patient commences with the warm salt-water bath, about three times a week, at a temperature of 96°, and is directed to remain in it from fifteen to twenty minutes each time. Afterwards, the tepid bath is used; and then, dependent on the state of the weather and the health of the patient, the cold bath is employed, one dip only in the sea being allowed each time. The time selected for bathing is in the morning. The cold or warm douche bath is often used in this stage of the complaint, and with very good effect.

2. It has been questioned whether rest is indispensable in all cases. Most assuredly it is not. When exercise occasions no pain, and induces no inflammatory action, it may safely be permitted. But the case in which it may be so, and the amount that may be taken, must be determined by the surgeon, on whose caution and judgment a heavy responsibility will lie. On the whole, there can be little doubt that passive exercise is preferable to active, and that if there is to be an error, one on the side of rest is the safest.

Rest of the part may be in some degree obtained, even when general rest is not enjoined. This has been effected by pasteboard splints and bandages, which are not so well adapted for the hip as for other joints—by the method recommended by Mr. Scott—or by a sort of case of lint, soaked in a solution of gum which hardens. Mr. Scott's mode of "doing up" a joint is so useful on many other occasions, that we extract an account of it for the benefit of those who may not be familiar with it. Many of our readers, no doubt, are so—some, however, are not, and the quotation will be useful to the latter.

"The surface of the joint," says Mr. S., "is to be carefully cleansed by a sponge, soft brown soap and warm water, and then thoroughly dried. Next, this surface is to be rubbed by a sponge soaked in camphorated spirit of wine, and

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this is continued a minute or two, until it begins to feel warm, smarts somewhat, and looks red. It is now covered with a soft cerate, made with equal parts of the ceratum saponis, and the unguentum hydargyri fortius cum camphorâ. This is thickly spread on large square pieces of lint, and applied entirely round the joint. Over this, to the same extent, the limb is to be uniformly supported by strips of calico, spread with the emplastrum plumbi of the London Pharmacopœia. These strips are about one inch and a half broad, and vary in length: some are fifteen inches; others, a foot; others, half these two lengths; and the shorter or longer are selected, according to the size of the part round which they are to be applied. This is the only difficult part of the process. This adhesive bandage ought to be so applied as to preclude the motion of the joint, and prevent the feeble coats of the blood-vessels from being distended by the gravitation of their contents in the erect posture, and thereby promote their contraction. Over this adhesive bandage, thus applied, comes an additional covering of emplastrum saponis, spread on thick leather, and cut into four broad pieces, one for the front, the other for the back, the two others for the sides of the joint. Lastly, the whole is secured by means of a calico bandage, which is put on very gently, and rather for the purpose of securing the plaster, and giving greater thickness and security to the whole, than for the purpose of compressing the joint. This is an important point, as otherwise an application which almost invariably affords security and ease may occasion pain, with all its attendant mischief." 84.

Of course, such a plan is not adapted for the case of active inflammation, of active effusion, of open abscesses, nor of abscesses actually forming. But it is excellently suited to very chronic cases, where warmth, support, and rest are calculated to be serviceable.

3. In a constitutional disease, constitutional remedies are, of course, indicated. On the general principles which should guide us in our treatment of scrofula, it would be idle for us to dwell. But latterly the iodine and the hydriodate of potass have been much employed in the management of scrofula. We confess that we think they have both been overrated, and that they are inferior to judicious combinations of steel, the liquor potassæ, and sarsaparilla. It would appear from the following passage, that the experience of the officers of the Sea-bathing Infirmary, has led to similar conclusions.

"Iodine has been very extensively used, during the last three years, at the infirmary, and the formulæ employed are those recommended by Lugol; varying according to circumstances. Latterly Dr. Canham, one of the physicians to the infirmary, informs me that the use of this remedy has been more confined to its external application than at an earlier period of its use; as in many cases its absorption has been rapid, and constitutional effects have been soon produced, in which case the internal administration of it has been suspended. Patients are met with, occasionally, who will not bear the external application of iodine in any form, even for a short time, without its producing constitutional effects; the symptoms of which are generally an increased velocity of pulse, very foul tongue, head-ach, pains in the back and limbs, thirst, loss of appetite, and the general symptoms of pyrexia." 102.

We must now part from our author. We have not attempted to go methodically through the history, symptoms, and treatment of diseased hip-joint. We have so fully and so lately considered the various affections of the articulations, that it is impossible for us at present to break up that ground again. Mr. Coulson has spared no pains in making himself acquainted both with the literature and the actual characters of the important complaint we now take leave of.

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PATHOLOGICAL ANATOMY.

I. LECTURES ON THE MORBID ANATOMY OF THE SEROUS & MUCOUS MEMBRANES. In Two Volumes. By *Thomas Hodgkin*, M.D. Demonstrator of Morbid Anatomy, and Curator of the Museum at Guy's Hospital, &c. &c. &c. Vol. I. On the Serous Membranes, and as appended subjects, Parasitical Animals, Malignant Adventitious Structures and the Indications afforded by Colour. 8vo. pp. 402. London, 1836.

II. THE CLINIQUE MEDICALE. By *G. Andral*. Condensed and Translated by *D. Spillan*, M.D. &c. Part V. Containing the Diseases of the Abdomen.

IT is unnecessary for *us* to say any thing on the value of the knowledge of morbid anatomy, nor need we dwell on the best means of becoming acquainted with its facts. Those means are within the reach of the surgeon or physician who practises in cities, but his less fortunate brethren in the country must be content to derive second-hand from books, what we obtain, fresh and fresh, from the dead body.

For the wide diffusion of information, the periodical press is chiefly to be thanked. Its powers must be great, and its objects should be good. Those who wield the former incur a serious responsibility, and without indulging in a mawkish affectation, we may say that a conscientious critic must feel that his duty to the public is a high one. For our own parts, we have endeavoured to encourage to the utmost the study of facts, to repress as far as possible the tendency to speculation, and whilst we have been far from prejudiced in favour of things that are merely recommended by antiquity, we have not taken the Curtian leap that some would appear so much inclined to do, into the abyss of novelty and of extravagance. To pursue so eclectic a course without error, would imply such an amount of judgment and sagacity, as we cannot pretend to lay claim to. But our faults, whatever they may be, have been mostly we hope on the right side, and if we have sometimes withheld, in the first instance, our belief in facts or in doctrines which have subsequently proved correct, the refusal has originated in the strict application of those rules of evidence, which are too often disregarded by writers and by reasoners on medicine.

None of our contemporaries have exceeded us in the earnestness with which we have insisted on the cultivation of morbid anatomy, nor in the zeal with which we have long endeavoured to disseminate its facts. We are not of that ultra montane school, whose researches begin and end in the dead-house, and who only look upon the living as the raw material of the dead. But we are fully convinced of the necessity of basing both the science and the practice of medicine on pathological facts, and we are convinced also that we have not yet attained as accurate a knowledge of those facts as is possible. We have not allowed a number of this Journal to be published for these two or three last years, without at least one article expressly dedicated to the subject of morbid anatomy. That plan we shall pursue, and we shall endeavour to give more completeness to its details;

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and we trust that we shall put our readers in possession of the current state of pathological information.

The principal works on morbid anatomy that have appeared within the quarter, are the two whose titles introduced these observations. M. Andral's work is, as its name implies, of a clinical character, yet it is so grafted on anatomical researches, and embodies so fully the facts which such researches elicit, that it cannot be separated from writings more ostensibly pathological.

Dr. Hodgkin is well known as a zealous morbid anatomist. His situation at Guy's Hospital gave him opportunities which his talents and his zeal have seized. His knowledge was conveyed to the pupils of the hospital in the form of lectures, and from the pupils it is offered to the public, through the medium of the press. The volume before us is the first of a series, probably three or four in number, and, judging from this, we may confidently prognosticate that all will be acceptable to the profession.

The subjects treated, are, as may be gathered from the title-page, the lesions of the serous membranes, parasitical animals, malignant adventitious structures, and the indications afforded by colour. Their examination occupies twelve lectures, which constitute so many chapters. The first is, of course, an introductory one—the second is on the serous membranes in general—the third is on the arachnoid—the fourth on the pericardium—the fifth on the pleura—the sixth on the peritoneum, tunica vaginalis, and bursæ—the seventh is crowded with parasitical animals—the eighth is on adventitious serous membranes—the ninth on the general characters of malignant disease—the tenth is on scirrhous and on fungoid tumors—the eleventh is on the colours of animal tissues—the twelfth reverts to malignant disease in general.

Although the present notice is in the body of this number of our Journal, the work itself was published too late in the quarter to enable us to do more than snatch a small niche for it. If we can give a sketch of the first and second lectures, that is the utmost we may hope to do.

The introductory lecture points out the utility and the necessity of an acquaintance with morbid anatomy. It gives a slight history of the progress of the science. The Greeks, the Romans, and the Saracens, were rather occupied with the disputes of the empirical and dogmatic sects, than engaged in the examination of the dead, which, indeed, either the religion or the prejudices of the period forbad. It does not, in fact, appear, says our author, that any distinct treatise had been written on the subject of *morbid anatomy* until the year 1674, when Thomas Bartholin, a Dane, published a work, entitled *Consilium de Anatomiâ Practicâ, ex Cadaveribus Morbosis adornandâ.* This was quickly followed by the celebrated *Sepulchretum, sive Anatomia Practica*, of Theophilus Bonetus, a physician of Geneva; respecting whom it has been said, "egregie, si quis alius, meritus est." He has given us, in an anatomical order, the result of his own careful observations, during forty years; together with a laborious collection from the works of his predecessors and contemporaries.

Morgagni, the father of morbid anatomy, appeared. After him came Lieutaud, Ludwig, who published in 1783, and Sandifort, who followed hard upon him. The morbid anatomy of Dr. Baillie did much for himself, and a great deal for medicine. It was not so minute as modern morbid

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anatomy is; but could that be expected? A consideration of the causes which have done so much for morbid anatomy of late years, must answer that question in the negative. Those causes are very properly considered by Dr. Hodgkin to be chiefly two.

"The first of these was the special cultivation of *General Anatomy*, the outlines of which were faintly sketched by Dr. Carmichael Smith. The higher praise, however, is due to the great Bichat; who, while he seems to have possessed the merit of originality equally with Dr. Smith, has pursued the subject into its minutest details; so as to leave little to his successors, but the introduction of a few slight modifications and divisions.

This indirect, but very important, service to the cause of pathological anatomy was not the only one which it received from Bichat. One of his last labours was the delivery of a course of lectures on *Morbid* Anatomy, of which he made his *General Anatomy* the basis. On the same basis, Pinel laid the outlines of his *Nosographie Philosophique;* and the numerous individuals of superior talent, who were fortunately brought together in the Clinical School of Corvisart—amongst whom Bayle, Laennec, and Rostan must be specially noticed—following up the same plan, have made most important advances in this department." 12.

The second cause is the establishment of the 'doctrine physiologique.' By morbid anatomy it was reared—by more minute morbid anatomy it has been overthrown—and both its supporters and opponents cultivated, with the ardour of enthusiasm and of party, the science from which they expected the elements of victory.

After paying a well-merited tribute of respect to Louis, and pointing him out as the originator of the statistic method, Dr. H. proceeds to indicate the order he intends to follow in his observations, the arrangement, in fact, of his "course." The basis of that arrangement is general anatomy, and he does with a diseased tissue what the healthy anatomist does with a sound one—investigates its physical states, its composition, and its functions. His method of proceeding may be gathered from the following table, which sets out the deviations from the natural state, that an unsound organ may exhibit.

DEVIATIONS FROM THE NORMAL STATE; CONSISTING,

1. In deficiency.
   a The result of suspended development.
   b Loss sustained.
2. In excess.
3. In form.
4. In appearances which may be regarded as the result of ordinary inflammation.
5. In appearances which are the result of scrofula.
6. In appearances which are the result of diseases called malignant, or resembling them in structure.
7. In hydatids in the particular organ.
8. In the effects of accidental injury.

Dr. Hodgkin proceeds to develop, seriatim, each head of the preceding arrangement. That is quite unnecessary, as our readers may see at a glance its characters and objects.

The second lecture is devoted to the morbid anatomy of the serous mem-

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branes in general. Our author deems it necessary to explain why he commences with them, rather than with the cellular tissue, which is a common element of all membranes, of all organs, and of all tissues. His reasons are unsatisfactory; but it is a matter of so little consequence, that we dismiss it. Provided all tissues are investigated, it signifies little, perhaps, with which we start.

The general anatomy of the serous membranes first attracts the attention of our author. The only remarks on this head that deserve notice, are some observations on the ultimate structure of the tissue, founded on its examination by Mr. Lister, the possessor of a well-known powerful microscope. Our readers are probably aware of the discrepancies that have always characterized the results of microscopic researches. The last microscopist has usually contended that his predecessors were deceived by optical illusions, and the possessor of the newest instrument has fondly hoped that *that* will decide the controversy. Whether we have really arrived at that perfection in the construction of the microscope, which will enable us to form definitive and correct opinions on the ultimate structure of the tissues submitted to it, or whether that structure is too subtle to be ever fairly cognizable by even the assisted eye of sense, are questions that it is at present impossible to determine. We shall simply state what Mr. Lister and Dr. Hodgkin have seen.

"The ultimate structure of these membranes, like that of the cellular tissue, has been regarded by most minute observers, both British and foreign, as consisting of extremely minute fibrillæ, so combined as to form lamellæ. By many modern physiologists, French and German, as well as English, these fibrillæ are believed to be composed, in their ultimate analysis, of globules, arranged like strings of beads. This opinion, I am fully convinced, has its sole foundation in an optical illusion. My friend Joseph Lister, who has carried the powers of the microscope far beyond any thing to which they had previously attained, has very minutely examined this, as well as most of the other animal tissues. He and myself have spent hours in the most careful examination of the subject, and not the smallest doubt is left on our minds as to the absolute fallacy of the globular theory. In fact, this theory appears to be completely set aside by *à priori* reasoning. The extremely delicate textures of which animals of the most minute microscopic size are formed precludes the possibility of the ultimate structure being visible to our eyes, however aided by microscopes. There are animalcules of such minute size, that their entire bulk is not equal in volume to that ascribed by the advocates of the globular theory to one of their integrant or primitive molecules. Lucretius has well observed, concerning the ultimate particles of matter, *Nequeunt oculis rerum primordia cerni.* The perfectly-formed membranes appear, I believe without exception, to consist of fibrillæ of tolerably even size, and in no respect resembling a chaplet of beads. Meckel denies the existence of the fibrous structure in the serous and cellular membranes; but believes that they consist of a coherent, homogeneous substance, which is viscid, amorphous, and, in the cellular membrane, scarcely solid; but more condensed, and coagulated in broad layers, in the serous. I imagine that Meckel must have been led to form this opinion from his having principally examined recent and imperfectly-formed membranes, to which the descriptive character given by him pretty accurately applies." 27.

Dr. Hodgkin insists on the approximation in the character of their secretions, of the serous to the mucous membranes, or rather of the convertibility of the one into the other. Our excellent friend is ingenious and argumen-

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tative, but perhaps the affinity is pushed rather hard. Yet, as he remarks, the synovial membranes and the vaginal sheaths do form a sort of half-way house between the pure serous membranes, as the arachnoid, and the mucous. Let us proceed to the lesions of the former.

The alterations in their secretion are noticed first, These are, an absence of secretion, when the serous sac is unnaturally dry—a rare affection; the production of gas, which, if possibly a secretion, is in most cases either of extraneous origin, as when the intestine opens into the peritoneum, or a vomica into the pleura: or the result of decomposition; increase of the natural secretion, constituting hydrocephalus, hydrothorax, &c.; perversion of the secretion, which may assume a mucous character, or a bilious, or a bloody; on the latter point, we shall extract a remark or two of Dr. Hodgkin's, because it is frequently a source of some difficulty, if not of error, to the inexperienced practitioner.

"The admixture of blood is as often a cadaveric, as a morbid phenomenon. To make an accurate distinction between these two forms, we must, as in the case of the presence of gases, be guided by the nature of the accessary circumstances. If the patient have died suddenly, and the blood have universally retained its fluidity—if the various tissues are soft and flabby, and have become stained by the transudation of the bile or the blood—there can be little doubt of the sanguinolent colour of the serum in the different cavities being a cadaveric appearance, except when the patient is known to have been labouring under scorbutus, in which case both causes have probably concurred. When we find the sanguinolent secretion confined to a particular cavity—when the membrane containing it appears to be rather injected than stained—and, more decidedly, when a local determination or injury is known to have taken place at the part—we may infer that the appearance of blood is morbid, rather than cadaveric. After all, I must confess that I have seen many cases in which it was very difficult, if not impossible, to draw the line." 33.

To proceed. Blood has been found in the pericardium, without appreciable lesion: and in the pleura: the fluid of ascites is at times sanguinolent: so is that of hydrocele, which may be superseded by pure blood, and become hæmatocele. Chyle and milk have been said to have been found in the peritoneum, the former just possible, the latter not; in such marvellous cases, the fluid has been probably a light-coloured, puriform secretion.

The lesions of the membranes themselves are:—

1. Deficiency. The arachnoid and even the pleuræ may be wanting in cases of monstrous fœtus. The pericardium has undoubtedly been absent. The peritoneum may be open in front. When the testis does not descend, its prolongation is, of course, not present.

2. Excess. Protrusions of the viscera they contain, cysts, &c. furnish examples of this.

3. The effects of inflammation. Of these a good account is given, taken from Villermé and Dupuytren, their researches are probably familiar, and have been published at various times and in various forms in this country. We shall, therefore, confine ourselves to an allusion to one or two particulars, and to the mention of the points on which our author differs from those gentlemen.

a. False membranes are the product of inflammation of the serous tissue, and those false membranes are themselves subsequently organized. The

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time at which vessels begin to be visible in false membranes appears to be very different in different cases. Villermé has never seen them before the twenty-first day, from the invasion of the malady; but Stoll mentions cases in which organization appeared to have taken place as early as the twelfth, or even the eighth day. Our author thinks that it has been witnessed earlier.

b. Villermé and Dupuytren conceive that the organizable matter is what they term concrete pus. This is first effused in the form of villi, attached to the serous surface that forms them. Being organized, this substance is absorbed, and cellular tissue deposited finally in lieu of it. Our author joins issue with Villermé on the nature of the original secretion, which he does not think to be either pus or puriform, but plastic lymph, the result of coagulation, the coagulable lymph, in short, of John Hunter. It may be observed, that Villermé and his associates, by employing the term concrete pus, imply a difference between it and common pus, though their subsequent remarks in many points obscure the distinction. Premising these remarks, which are requisite for the right understanding of our author's argument, we subjoin the latter.

"I find it impossible to unite with these authors, and with Sir Everard Home, Laennec, and several others, as to the organizable properties of pus or puriform secretions. I believe them to be always, more or less, excrementitious; and that where an outlet from the body is not afforded, they invariably retard cure, by interfering with the progress of organization in those substances which are formed in conjunction with them, and are susceptible of this change. You will remember, that I have mentioned several varieties in the effusions met with in the cavities of serous membranes; and I would particularly recall your attention to one form which has the power of coagulating like blood. This I believe to be the most eminently plastic effusion, which, as coagulation advances, very rapidly assumes the form of tender diaphanous films, which we find separated by, and infiltrated with, a limpid, but often straw-coloured serum. They are not in general originally applied and attached to the surface of the inflamed serous membrane; and it frequently happens that the union is ultimately only partial, yet amply sufficient for their organization and support. Though these diaphanous films, or incipient false membranes, do not appear to be necessarily formed in immediate contact with the surface of the serous membrane, it is no less obvious, that their formation is often, if not generally, materially influenced and modified by the membranes in the cavities of which they are contained, as may be best seen in the peritoneum; since we find them assuming the form, and adapt themselves to the irregularities of those cavities, even where they are accompanied by a large proportion of serum.

The opinion which I wish to support in opposion to Villermé and which I have been led to form by a careful examination undertaken in consequence of perusing the work of Villermé, is, I believe, in some points, little more than a return to the doctrine of John Hunter, though not borrowed from him. I find myself perfectly in accordance with this great master of his profession, in regarding the formation of the tender diaphanous films composed of the plastic part of the effusion (the coagulable lymph of John Hunter) as the result of a process of the same nature with the coagulation of the blood. Hence, from the first, they are continuous and homogeneous, even whilst they can scarcely be said to be solid; a state which they attain by the separation of the serum, rather than by the aggregation of floating particles or villi." 45.

The theory of coagulable lymph seems in many respects more consistent with reasoning and indeed with facts, than that of "concrete pus."

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Whether, however, the deposition of the lymph can be deemed, in all cases, a species of coagulation may perhaps be considered problematical.

The mode in which the vessels penetrate, or are developed in the false membrane, has long been a fertile source of speculation. Are they developed in the new nidus, or are they prolongations of the vessels of the membrane on the surface of which the false membrane has been deposited? When we look at the growth of bone, a tissue which illustrates in a remarkable degree the phenomena of growth, we find vessels carrying *red* blood in the centre of the cartilage, when a continuity of such vessels, with those of contiguous tissues, can be with difficulty, if at all, demonstrated. But all the concurrent phenomena seem to shew that those vessels are the productions of others, and that the neighbouring membranes, periosteum, perichondrium, the cellular, or the synovial, as the case may be, are the real sources of supply. To be sure, these investigations relate only to the deposit of the earthy material, and the earlier phenomena of growth are less certain. In the soft and almost mucous tissues of the embryo, it is far from clear how the vessels are developed, and the exact operation of the nisus formativus is a subtle mystery, and will probably continue so. The phenomena of inflammation and of growth are so allied, the formation of new tissues and the natural development of the old are so analogous, that we turn from the one to the other for assistance in the comprehension of their several processes.

To return to the organization of false membranes. It is more natural to conclude that their vessels do originate in the vessels of the parent tissue. Dr. Hogdkin's opinion, or rather theory, is this:—

"That, at the inflamed part, the minute blood-vessels not merely become distended, but that their delicate parietes, and the structure through which they ramify, become softened, and, yielding to the pressure of the blood in the distended vessels, give way at numerous minute points. This I believe to be the explanation of the fact, that when we raise an adherent false membrane of a few days standing, we find that the original serous membrane beneath has lost somewhat of its polish, and presents numerous minute bloody points. The very small quantity of blood thus escaping from its vessels does not diffuse itself, but is received into the soft substance of the false membrane, which accordingly exhibits numerous bloody points on the surface which has been detached from the serous membrane. These spots, which are at first irregular, afterwards have a dendritic appearance; and extending in length, they become vessels. These vessels being feebly supported, are distended and larger than those in the original structure from which they proceed; hence the redness of newly-organized false membranes. At a subsequent period, these vessels contract, and may become nearly or quite visible." 50.

We must confess that this hypothesis does not greatly help us. *Why* should minute extravasations of blood precede the formation of the vessel—*how* does that extravasation become a vessel? In reference to the first question, we may observe that there appears to be no necessity whatever for such effusion; the plastic lymph, offering quite as good a raw material for bloodvessels, as the coagulum. In reference to the second, we may remark that although our author expresses his inclination to believe the fact, he is not so indiscreet as to attempt an explanation. We fear that this is one of the many ultimate phenomena, on which the utmost information that we can anticipate obtaining, amounts only to probability.

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There is an important law of inflammation of serous membranes, the interest of which may justify our alluding to it. At the same time that it is inclined to spread, it displays after injury, a tendency to limitation, particularly if the opposite points of two serous surfaces are wounded. The following illustrations of this fact are striking.

"If a patient has recovered from a penetrating wound of the thorax, by which both the pleura costalis and a corresponding spot of the pleura pulmonalis have been injured, you will very probably find the pleuritic adhesion confined to the immediate neighbourhood of the wound. Bichat had an opportunity of examining the body of an individual who had been affected with melancholy, under the influence of which he had, at different periods of his life, wounded himself with a knife twelve or fifteen times. In the most recent wounds, the intestines adhered to the parietes; in those which were somewhat older, they were connected by bridles; in a third class, which were of longer standing, the bridles were longer, and more slender; and in those which were the oldest, and of very long standing, the connexion was dissolved. You must, all of you, be aware of the very great danger which attends a wound of the dura mater; which, producing an opening into the cavity of the arachnoid, is extremely liable to lead to acute inflammation of that membrane, seldom affecting less than the entire surface of one hemisphere, and often extending over both. Yet, if the injury have been still greater, and have affected not only the arachnoid lining the dura mater, but that which covers the brain, and have even produced the loss of a portion of that organ itself, it is by no means uncommon for the symptoms to be comparatively slight. The late Henry Cline, jun. used to lay considerable stress upon this fact, in conjunction with injuries of the head; and suggested the propriety of designedly lacerating the arachnoid and pia mater, in cases in which the dura mater alone has been wounded." 55.

Perhaps the latter recommendation is going a little too far. Did we follow Mr. Cline's advice, we should perhaps be only leaping out of the frying-pan into the fire. We *might* increase the tendency to limitation of the inflammation—we *should* increase the risk of hernia cerebri.

False membranes gradually display a diminution of their vascularity, and become pale, and even indurated. They may even assume a cartilaginous, nay, ossific character, the circumstances favouring or determining which are dubious. We have reason to believe that the following observation of our author's is well founded; at least, it coincides with facts that have come under our own observation.

"The contraction of the organized product of inflammation, to which I have already alluded, often gives rise to strange deformity of the parts to which they are united. Laennec was the first who pointed out the remarkable retrocession of one side of the chest which takes place when a patient survives and recovers from empyema. This he ascribed to the absorption of the fluid; but, as I suggested to the Physical Society of this Hospital, in a Paper which I read on the application of the stethoscope, in the year 1822, I believe the true cause to be the contraction to which I have just alluded. I am confirmed in this opinion from having observed similar effects, where the cause, to which Laennec refers, could not have operated." 57.

The best marked case of contraction of one side of the thorax that we ever witnessed, was the consequence of encephaloid growths in the lung, independently of any pleural effusion at all.

The subserous cellular tissue is often the seat of inflammation and of effusion. Its proneness to the latter is, or seems to be, in the ratio of its

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looseness. Serous infiltrations are very frequent in the sub-arachnoid cellular tissue. We doubt, however, the absolute correctness of this axiom. Other circumstances exert an influence. Beneath the sub-arachnoid cellular tissue is the pia mater, a very vascular membrane; there effusions are common. The cellular tissue beneath the occipito-frontalis muscle is very loose, much looser than the subcutaneous cellular membrane. Yet inflammatory effusions are much more frequent in the latter than in the former, because the causes of inflammation are more rife in it. When inflammation *does* invade a loose cellular tissue, effusion runs along it like wildfire, because there is nothing to arrest it; but, accidental circumstances apart, it is doubtful whether that cellular membrane is particularly *prone* to inflammation.

Gangrene of a serous membrane is rare. Lieutaud has mentioned one instance in the pericardium; and the highly offensive and discoloured condition of effusions into some of the serous cavities, described by Bichat, was probably attended with a state of membrane approaching to sphacelus. Dr. H. has never witnessed an example of it, unless the gangrene was one of extension from neighbouring parts.

The effects of struma on the serous membranes are not confined to scrofulous deposits in the cellular membrane, or on the attached surface of the serous. Both *in* the latter and *on* it, we see collections of tuberculous or scrofulous matter. In them we see also miliary tubercles.

Malignant disease is usually confined to the sub-serous cellular tissue. Yet minute bodies, having the character of scirrhus, have been found in the substance of the serous membranes, in individuals who had malignant disease elsewhere.

Serous membranes, being membranes of isolation, do not usually transmit inflammation to each other. But a sympathy unites them when remote. Thus the pericardium is apt to inflame, in company with the synovial membranes; or the pleura, or even the arachnoid, may do so.

Such is a sketch of the principal portions of the first two lectures of our able and amiable author. In our next number we shall continue the subject, and present a lengthened notice of the pathological facts contained both in this and in other works. We recommend the present volume both to the young student and the old.

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De la Prostitution de la Ville de Paris. By *M. Parent-Duchatelet*, M.D.

[Second Article.]

In our last number we gave a condensed analysis of the first three chapters of the work before us. We find that these volumes, melancholy or even disgusting as they sometimes are, have excited much curiosity among non-professional readers, and we have no doubt that they will do the same within the range of the profession. We shall proceed at once to details.

Fecundity of Prostitutes. The state of menstruation varied so much among these females, that nothing very positive could be inferred from investigations the most careful. In respect to fecundity, there is a general impression that prostitutes seldom become pregnant. Inquiries among books and men led to the conclusion that out of a thousand prostitutes scarcely six became annually pregnant, so as to run the full term. They generally have recourse to La Maternité, when about to be confined, and the sage-femme of that establishment, Mad. Legrand, informed our author that from four to six became inmates there every year. They almost all had difficult births, requiring the aid of instruments—and the infants rarely survived. Many of the mothers themselves die in child-bed. Still a more careful and extended enquiry among the medical officers of hospitals, dispensaries, prisons, police bureaus, &c. has convinced our author that pregnancy takes place among prostitutes much more frequently than is imagined. He has reason to believe that, from 30 to 60 are annually delivered in Paris. But abortions during the early months, and even up to seven or eight months of pregnancy, are found to be frequent. Abortions are not seldom procured artificially by these females.

Syphilis and the Itch. Of all the diseases to which these poor creatures are exposed, none are more frequent than those which we here mention. But these two are reserved for distinct chapters.

Menorrhagia—Tumors—Recto-vaginal Fistulæ—Cancer Uteri. Prostitutes are more subject to suppression of the catamenia than to profuse menstruation. Nevertheless, the latter is not very infrequent. Tumors of the labia pudendi are very common. They are indolent, and chiefly contain a thick albuminous fluid. They grow to an inconvenient size if neglected. When opened they almost invariably discharge a liquid of the most fetid smell. If it touch the hands of the operator, he will not get rid of it for some days. There are about 30 cases annually of recto-vaginal fistulæ, and strange to say, they sometimes heal of their own accord, while these patients are pursuing their ordinary avocations! These fistulæ have generally been found to coexist with phthisis. Cancer of the uterus, though sometimes met with, is very rare among prostitutes.

Mental Alienation. Weakness of head—state bordering on insanity—is one of the most frequent complaints that are attributed to the mode of life of the prostitute. Esquirol has received into the wards of the Saltpetrière, an average of 21 insane prostitutes annually—a stupendous proportion! There can be no doubt that this large proportion of mental alienation is owing to

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the unhappy and unhealthy modes of life pursued by these miserable creatures, and not to mercury, as has been foolishly supposed. Scrofula is exceedingly prevalent among this class also.

CHAP. V.

Tolerated Brothels. The police being unable to prevent the existence of such places, tolerates, but does not authorise them. It endeavours to diminish the evils of them. Such haunts have existed in all ages and countries. The Romans designated them *Lupanaria.* In the age of St. Louis (1254) they were christened by the name of BORDEAUX in Paris—probably from their being chiefly situated on the borders of the river. They are now called "public houses"—"bad places"—but in the police bureaus—simply "*maisons tolérées*"—tolerated houses. They are under the following regulations. Two of them are not permitted in the same place—that is, with one common entrance, or one common staircase. This wise regulation is grounded on the old maxim—"two of a trade can never agree." Each prostitute is compelled to have a separate chamber to herself. These houses are not permitted to have communication with neighbouring houses—and they must have back or private entrances. Previously to 1811, these places were horrible depôts of filth and sickness. M. PASQUIER issued an order to have them all examined, and such as were unwholesome were to be shut up. In fact, this prostitutional reformer made a clean sweep among the brothels, and rendered them comparatively healthy and sweet!

The bagnios are not tolerated in the immediate proximity of churches of any denomination—palaces—great public establishments—the residences of great functionaries—female or male schools—certain furnished lodgings. The distance varies according to circumstances. One hundred paces is the minimum distance of a brothel from a church. Napoleon was very particular on this point—and the Louis, at the restoration, were still more so. Generally speaking, the government sets its face against the establishment of bagnios in narrow and little-frequented streets, where robberies or even murders might be easily committed, in despite of the police.

It is remarkable that rows and "flares-up" are very unusual in the Parisian bagnios. They do take place occasionally, and, as it seems, periodically. They are the result of drunkenness. Saturdays, Sundays, and Mondays, in the low quarters, are the most disorderly.

The keepers of bagnios are allowed to receive *passengers*, as it were—a few beyond the allotted number for which they are tolerated. But there is a number of houses of assignation, which the police has great trouble in watching, and which are exceedingly prejudicial to morals and health. Married women and married men resort to these, and there are hundreds and thousands of spies and emissaries constantly on the look-out for provender for these infernal rookeries! Splendid dinners are given—immense sums gambled away—and the most tip-top prostitutes are there to be found! But we must pass over a number of details which are interesting to the inhabitants of Paris, but not to us.

CHAP. VI.

Registry or Inscription of Prostitutes. This was commenced in the French capital in 1765, but the records are either lost or useless. In the storms of

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the revolution, the prostitutes were left to their own governance, and the most scandalous scenes of debauchery were daily presented to public view. It was not till the year 1796, that some kind of order was re-established—and then the order was little more than disorder. In 1816, the system assumed a considerable degree of perfection—and in 1828, it was brought to its present state of discipline.

INSCRIPTION.

The inscribers are ranged in three classes.

1mo. Those who come to the office, and register their own names.

2ndo. Those who are brought to the office by the keepers of houses.

3tio. Those who are arrested by the inspectors and brought to the office.

In all these cases certain interrogatories are put. The name, age, place of birth, profession, present residence, are all registered. Then she is asked if she be married, widow, or single—if her parents be living, and how employed—why she quitted them, if she have quitted her family—whether or not she has had children—how long in Paris—how long in a state of prostitution, if she have commenced the trade—if she has had, and how often, any venereal complaint—if she has received any education—why she has determined to register?

These and numerous other interrogatories fail not to draw forth a great deal of curious and valuable information. They are visited by the deputed physician, and certified as to soundness or unsoundness. The neophyte then subscribes to certain conditions, thus forming a kind of contract, which legalizes the punishments which are often obliged to be inflicted on them afterwards. Not long ago three elegant young English ladies, of superior education and polished manners, applied at the Bureau to inscribe their names. The officer was convinced that there was some secret kept in the back-ground, delivered them passports, and caused them to quit Paris immediately. Young people coming to register and declaring themselves to be virgins are refused a licence.

A long description is given by our author of the mistresses or keepers of houses of ill-fame, and the qualifications which they must possess, before they are granted a license. They must not be too young—they must prove that they are possessed of some property, &c. but they contrive to elude most of the conditions imposed on them. These dames have no small opinion of their consequence. They do not consider *their* trade as at all illicit or disreputable. They think themselves as much above the prostitutes by whom they live, as the great landowners in this country consider themselves elevated above the boors on their estates. They have a secretary, with a large salary, who manages all their literary concerns, petitions, &c. &c. He has placed over his Bureau—"*this is the grave of all secrets.*" The author has recorded a number of petitions from these dames, and from prostitutes who are candidates for the honourable and lucrative office of brothel-keeper, but these we must pass over. In the recruit of their corps they evince considerable skill, without many scruples. They have agents in the hospitals —and even in the country, to entice fresh hands into their unhallowed vineyard. Our author describes the state of dependence, or rather slavery, in which the mistresses of these houses hold their unfortunate inmates! This,

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however, we believe, is not peculiar to Paris, but applies to all capitals. One good trait in the character of these dames is, that they never allow their own children to be brought up in their own houses. They generally indeed give them a good education, and have been known to advance large sums to get their children well off in the world. They take the greatest pains to conceal from their offspring the nature of their own avocations.

CLANDESTINE PROSTITUTION is next delineated in its horrible effects on public morals and private health. He considers it infinitely more destructive to both than public prostitution. The most infamous feature in this dark conspiracy against virtue and morality, is the seduction of mere children to be sold at a high price to rich debauchees! The schemes and manœuvres practised for these purposes are too heart-rending for detail, and we therefore pass them over.

The second volume and the 15th chapter commence with a curious subject and a curious question—what becomes of prostitutes when they are no longer able to pursue their triste avocations? This is not easily answered. We have often asked ourselves what becomes of the bodies of all the wild animals that die on this earth? It is somewhat the same with the prostitutes —Nobody knows! It may be remarked, however, that some of them realize a little property, on which they retire after a certain age—some get married—others are received back by their friends—some procure service—many are imprisoned, or get into hospitals or other establishments where they die. A majority, however, of these unfortunates disappear from the stage of existence in a manner totally unknown to the Police!

The 16th Chapter is on the benefit—the necessity of keeping a sanitary surveillance over prostitutes, and of examining them from time to time, in order to check syphilis—a disease worse, in M. P.'s opinion, than the plague and all other contagious maladies. It was in 1747 that the idea of examining prostitutes was first started; but it was not till 1802, that a kind of prostitute medical club was established, under no less authority than M. Leroux, who pocketed six thousand francs annually—for doing nothing. The demerits of this club (supported by a tax on the prostitutes) were at length denounced, and the "DISPENSAIRE DE SALUBRITÉ" was re-organized and reformed under the auspices of M. Pasquier in 1810. The new Personnel was composed of a first surgeon and a first physician—a sub chief physician, and ditto surgeon, at 3000 francs a-year each, the higher ranks having double that sum—two eleves, one medical, the other surgical, at 1800 francs each—an apothecary and registrar, at 2400 francs—in all 24,000 francs per annum. M. Pasquier ordered a weekly report to be regularly transmitted to him from the Dispensary—and a permanent commission was formed to watch over all its concerns.

Under this new regime, the frightful extent of venereal diseases was first clearly recognized, and great hopes were entertained that a stop would be put to the spread and even existence of the loathsome malady, when the invasion of France by the allies, threw every thing into disorder in 1814, and the same confusion prevailed in 1815, after the battle of Waterloo. The prodigious number of foreign troops, at these epochs, in Paris and its vicinity, augmented the amount of syphilitic affections to an inconceivable extent. M. Anglès came to the Prefecture, and eclipsed even M. Pasquier, in vigilance and correction of the evil. This good state of things did not last

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long; for we find from 1820 to 1828, every thing went into disorganization. The reason of this is not satisfactorily given.

The sanitary visits of the officers of the Dispensary are made at three different places—viz. at the Dispensary itself—at the houses of the females —and at the Depôt of the Police. At the Dispensary are seen, twice a month, the free girls (filles libres), all those who are registered for the first time—and all those who, wishing to leave Paris, demand a passport for that purpose. The examination is made in a private apartment. In the prisons and hospitals the inspection takes place on a table, similar to that on which operations are performed; but at the Dispensary, this is not done, lest the bonnets of these "elegantes" should be hurt by the recumbent posture. On a moderate calculation each medical officer can examine twenty-five prostitutes per hour, and enter their report in a book.

The domiciliary inspections are made twice a month at the houses of the individuals, and registries kept of all diseases with which the women may be affected. An infected girl is immediately ordered to the Dispensary, where she is again examined, and despatched to the hospital. The number of infected females sent to hospitals monthly, varies from 51 to 110—and the distribution of infection, before these are sent to the place of cure, must be enormous. In times of prosperity and plenty the number of venereal affections always increases, and *vice versa*. When the cholera raged, venereal affections almost disappeared!

There are a certain, or rather uncertain number of prostitutes who are insusceptible of the contagion of syphilis. This is incontestible; but, in this respect, they differ not from men, a certain proportion of whom are also infractory (to use a Gallic expression) to venereal maladies. Some of the physicians attached to the dispensaries believe that one-half of the prostitutes are insusceptible of the venereal disease. Our author thinks that they have over-rated the proportion of insusceptibles, but they are not a great way from the truth. He gives strong reasons for this conclusion, into which we cannot enter. We do not know that an exact calculation would be of any particular use; but the immunity in question may be serviceably applied to the immunities from other infectious diseases—and still more to epidemics.

Notwithstanding the ability acquired by the dispensary physicians of detecting diseases in the prostitutes submitted to their examination yet they are sometimes at a loss, and cannot decide. They then put the suspected person in sequestration, and order the mistress of the brothel to keep her from communication with man till she is again examined, under pain of having the establishment closed for a longer or shorter time.

Has the intensity and frequency of venereal affections abated within the present century? This important question is decided in the affirmative by our author. Unfortunately the statistical tables by which he meant to prove this affirmative, were not constructed at the period of his decease, and we have only his own assertion in proof of the fact. Fortunately for humanity all practical observers concur in the truth of the assumption that venereal diseases are infinitely milder in their nature, as well as less frequent in their occurrence, than in the days of our ancestors. M. P. Duchatelet affirms that there is a pretty regular decennial decrease in the virulence and number of syphilitic maladies.

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Our author endeavoured to ascertain whether *age* had any influence in modifying the susceptibility to venereal infection, but he acknowledges that his enquiries have not led to any satisfactory result. The same observation applies to the season of the year. M. Trail, of Nancy, however, asserts that, from thirteen years of observation and registry, chancres and buboes are more frequent in Winter—gonorrhœa in Spring and Summer.

HOSPITALS FOR VENEREAL DISEASES.

The venereal disease was first recognized in Paris, on the 6th March, 1497, as proved by an "Arrêt" of Parliament, which ordered all infected foreigners to return to their own countries—people of easy circumstances to keep within their own houses—and the poor to repair to a certain establishment allotted for their reception. No means of cure entered into the regulations of this venereal hospital—which, by the way, was only for males, the females being left to their own resources. It was not till the year 1505, that an hospital for the treatment of the disease was *ordered* by Parliament—which order remained a dead letter for 30 years afterwards! In 1535 a building was erected containing two wards—still for males—capable of containing between three and four hundred patients. But various intrigues rendered this establishment completely inefficient, and it was not till the year 1614, that the Hôtel Dieu was compelled to afford succour to venereal patients—and these only the lords of the creation! Not a word was ever heard of any establishment or remedy for females! In 1657, in the reign of Louis the 14th, some indication of affording relief to infected females was apparent—and but apparent! In 1691, venereal females were admitted into the BICETRE, where the state of these wretches baffles all description, as to misery and disease! In 1730, there were collected, in a narrow ill-ventilated, damp, and crumbling corner of the BICETRE, 400 syphilitics. They were, for the most part covered with ulcers, and in the most deplorable state of health. In 1784, M. Breteul, Minister of the Interior, was horrified at visiting this depôt of misery and vice, and projected a syphilitic hospital in the Convent of the "Capucins de St. Jaques," but like many other projects, it fell to the ground. The Constituent Assembly took the affair in hand, and since 1792 the venereal wards of the CAPUCIN have presented a very different aspect.

The venereal hospitals were sadly deranged in 1815, when France was invaded; but since that period, their organization has been more complete than ever. There are now several. In some of them, as the HÔPITAL DU MIDI, the patients have been set to work, in making charpee, &c. &c. which project has completely failed. Religious instruction was tried with much beter success. The prostitutes attended regularly at divine service, and behaved themselves in the most respectful manner.

Several chapters on police regulations and other matters connected with Parisian prostitution must be passed over in silence, as not particularly interesting to the English medical reader. We close the book with considerable regret that the author did not avail himself of the unique opportunities which his situation afforded him, of making statistical reports on the more purely professional part of the subject. The state of medicine and surgery, as far as regards the various forms of venereal affections, is entirely

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passed over. We can easily believe, however, that, had the author lived, this subject would have been fully treated of. Death cut him short—and the present volumes only were left fit for publication. They will be read very extensively beyond the sphere of the medical profession, and they will remain a lasting memorial of the author's unexampled industry. We agree with a contemporary reviewer, that there is scarcely a sentence in these volumes calculated to offend the most delicate ear, notwithstanding the revolting nature of the subject! We are not sure that a considerable portion of these volumes might not be perused in the *boudoirs* of our ladies, without any serious injury—perhaps with advantage. But, be that as it may, the politician, philosopher, philanthropist, and physician, will read these volumes with no common interest. In the two articles which we have dedicated to their analyses, we have endeavoured to present the chief points of interest to a large class of our readers who cannot be expected to purchase or peruse the original.

A Treatise on Tetanus, being the Essay for which the Jacksonian Prize, for the Year 1834, was awarded by the Royal College of Surgeons, in London. By *Thomas Blizard Curling*, Assistant Surgeon to the London Hospital, and Lecturer on Morbid Anatomy. 8vo. pp. 236. London, 1836.

Our readers may feel surprized at observing in our pages a Review of a new work on Tetanus. They may experience some difficulty in reconciling the phenomenon with our professed creed of utilitarianism.

But softly gentlemen. We will soon convince you that we are not straying from the spirit, nor indeed from the letter of our professions, and this review will be speedily acknowledged to be a very proper and a very useful one.

The book before us is not what might be expected—an elaborate disquisition on the cause of the disease—or a bold annunciation of a cure for it. It does not say that tetanus consists essentially in redness here or redness there—in inflammation of the spinal marrow, or in a colon full of fæces—nor does it assert, that the world is under a delusion with respect to the incurability of the disorder, and that Mr. Blizard Curling experiences no difficulty in subduing it.

It is in fact a little work conceived and executed in the right spirit of philosophy. The author, knowing how fallacious the experience of any one man in such a malady must be, has gone the proper way to work, and collecting and comparing a large number of published cases, he has taken a statistical survey of their features. This is just what is wanted in such a complaint. No method is more calculated to dispel prejudice, or to enlarge our views with respect both to the causes, the march, and the result of a disease of this description. Let Mr. Curling say what he has done.

"In order to acquire more accurate knowledge respecting this disease, as well

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as to obtain data to reason from, 128 cases of traumatic Tetanus have been carefully examined, analysed, and arranged in a table, distinguishing the sexes, and giving the ages of the patients, the nature of the injury, the time subsequent to the infliction of the wound at which the disease first showed itself, the result, and at what time after the appearance of symptoms, a general view of the treatment, and the sources from which the cases have been obtained. It would have been desirable to have added to these particulars an account of the trade or occupation of each patient, and of the state of the pulse; but as in most instances nothing is said in respect to these points, it is obvious that the columns devoted to them must have been exceedingly imperfect." *Introd.* ix.

The false facts of medicine have been often denounced. They are infamous enough. But the half facts are equally dangerous. Not to tell the whole truth is, in some cases, virtually to tell a lie. This system of constructive mendacity prevails to no trifling degree. A man has no inducement to publish his failures. Why should he intrude his want of success upon the world? But he has a very strong inducement to trumpet his success; accordingly he does so. If such a man has a fatal case of tetanus, there is no necessity for his relating that. There have been many other fatal cases of tetanus, and a fresh one is not likely to be very instructive. But if he happens to have a case which does well, of course he would not keep that back, and, in order that it may be more impressive, nothing is said about those which have done ill. The consequence is, that if we trusted books we should believe that tetanus is a very curable disease, which those of us who have a pennyworth of experience know that it is not. In Mr. Curling's work, for instance, one hundred and twenty-eight examples have been taken indiscriminately from various sources; *and although it is well known that by far the greater proportion of the subjects of this disease never recover, yet fifty-eight, or nearly one-half of them, are instances of cure.* This is pretty well, and speaks highly for our professional literature. It almost justifies the contempt which some express for its recorded facts.

Of course we have no intention of presenting a connected account of the complaint. All we intend doing, is selecting some particulars which have been illustrated, confirmed, or corrected by the comparison of these numerous data. This is the only plan adapted for us, and it must necessarily give the article a disjointed character. But that is of no moment, and we must proceed to business.

The work consists of four chapters and an appendix. The chapters are devoted successively to—a general account of tetanus—its pathology—its treatment—and to tetanus nascentium; the Appendix is composed of the table of cases already alluded to, and of their bibliography.

1. GENERAL ACCOUNT OF TETANUS.

The first point to which we may allude, is the important practical division of tetanus into the acute and chronic, the former very fatal, the latter comparatively trivial. This distinction has been frequently insisted on. Yet in societies and in books we find surgeons overlooking it, and recording the cure of chronic tetanus with as much formality as if it were not common enough.

Passing over the symptoms of tetanus, unfortunately too familiar, we may pause to survey the peculiar characters that it imprints upon the countenance.

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The expression of this, although sufficiently uniform to be characteristic of the disease, is not invariably the same in every case. Aretæus observes, that distortion of the face is so great that patients are not recognized by their most intimate friends. A case of idiopathic tetanus is related by Dr. W. Farr, in the fourth volume of the Medical Observations and Inquiries, in which the spasms of the muscles of the face had so deeply impressed the marks of age on the countenance of the patient, who was only twenty-six years of age, as to induce all who saw him in that state to believe that he was at least sixty. Mr. Curling once observed the same circumstance in an equally remarkable degree.

Tetanus, we all know, is a horribly painful disease. The patient usually suffers agony during the continuance of the spasms. But Sir Gilbert Blane mentions, on the authority of a surgeon in the navy, an extraordinary case of Tetanus which proved fatal in four days, where the sensation, excited by the violent muscular contractions, was a sort of tingling of a pleasurable nature. In case 81 in the table, no uneasiness was occasioned by the spasms of the muscles of the jaw and throat. Pain at the præcordium, dependent, probably, on spasm of the diaphragm, has been called the pathognomonic symptom of tetanus, and some writers have asserted that, when it occurs, the disease invariably proves fatal. The cases collected by our author prove that this is not the fact, and, in many instances, the patients recovered, although this symptom was severe.

Mr. Curling has generally found the pupil contracted in tetanus.

The spasms, it is notorious, are essentially seated in the muscles supplied with nervous influence from the brain and spinal-marrow. Yet patients sometimes die so suddenly that implication of the heart has been accused of giving rise to the occurrence. Dr. C. H. Parry has attached great importance to the state of the heart, which, he imagines, becomes exhausted, and first loses its vital powers. Dr. Currie remarks that "the patient, where the case terminates fatally, probably dies at last from spasmodic affection extending to the heart." Mr. Travers is likewise of opinion that the disease travels ultimately to the heart and other viscera, a view which has been advocated by Mr. Howship, who has published a case, where the patient, in describing his sufferings, is reported to have said, that "he felt that his heart was at times ready to break with the distress of its pain." This organ, when examined eleven hours after death, the body being still warm, was found so much reduced in bulk as not to occupy a fourth part of the cavity of the pericardium, appearing to be very unnaturally shortened from the basis to the apex. The resistance upon pressing the muscular ventricles resembled that of a very firm and even horny substance rather than of a mere fleshy cavity. The substance of the heart felt in every part unnaturally firm, to a degree far beyond what can be well conceived. The auricles, as well as the ventricles, were greatly contracted. The sides of the left ventricle were found in the closest contact, so much so that when a section of the heart was made, the exact situation of the cavity was not immediately to be perceived. About half an ounce of blood still remained in the right ventricle. The auricle on the right side contained about an ounce of blood, that on the left a much less proportion. The heart was removed from the body, and upon being examined a few hours afterwards, it was found to have become completely relaxed, was much larger and softer,

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as well as very flaccid, having entirely lost that very peculiar and remarkable state of tone which it possessed at the time of its being first inspected. No other morbid appearance is described, and Mr. Howship concludes "that it was on every side clear, that the muscular structure of the heart had in this case become at length subject to the same affection which, during the earlier stages of the disease, was confined principally to those parts of the body subservient to voluntary motion." Mr. Curling justly remarks that the correctness of this conclusion is by no means certain. For, in the first place, the heart may often be found extremely firm after death—and, secondly, evidence is against this being the usual condition of the organ in tetanus. Dr. Reid, for example, after relating the morbid appearances in a case of Tetanus, observes, that "the difference of the ganglionic system from the spinal was well marked, by the influence of the disease not extending in a similar manner to the muscular organs of both systems. This was marked by the muscular parts of the heart and intestines being paler than natural, while the muscular organs belonging to the spinal system were remarkably florid and rigid." During the continuance of the complaint, the heart displays no symptom of being affected with the spasms that convulse the voluntary muscles, on the contrary, its action is generally accelerated. Of course it is impossible to affirm that the heart is in no case affected, but, in the great majority, there is no reason to believe that it is so, and, even where it has been supposed to be concerned, a simpler explanation of the sudden death may be offered.

"Dr. Parry has, however, gone further, and has attempted to establish grounds for forming a probable conclusion as to the event of the disease by attending to the state of the pulse. He says, 'If in an adult the pulse, by the fourth or fifth day, does not reach one hundred or perhaps one hundred and ten beats in a minute, I believe the patient almost always recovers. If, on the other hand, the pulse on the fourth day is one hundred and twenty or more in a minute, few instances will, I apprehend, be found in which he will not die.' The accuracy of a prognosis founded upon the state of the heart's action, was verified in six instances. I regret that the state of the pulse having been so rarely recorded in the reports of the cases composing the table, it is impossible to obtain any satisfactory data upon this point; but Dr. Parry's rule is not sustained by the testimony of other writers of experience. Dr. Morrison, who had ample opportunities for observation in Demerara, states that the pulse seldom exceeds eighty. In a boy, who fell a victim to the disease on the third day, in the absence of spasms the pulse was ninety-eight, but he has never remarked it higher than this. Dr. Hennen found the pulse in the cases that he had met with, astonishingly unaffected, and the same was observed by Sir James Macgregor. In cases 19, 33, 36, 55, 57, 60, 87, 90, 95, 115, and 125, although the pulse exceeded one hundred and ten beats, the patients recovered. In all those cases which I have witnessed, the action of the heart, as well as the respiratory movements, has been in some degree accelerated; and during the paroxysms there has generally been a further increase of about ten or twelve pulsations in the minute, whilst towards the close of the disease the pulse has been feeble, irregular, and sometimes intermittent. In case 113 the pulse was as much as one hundred and eighty during the paroxysms. This increased action is readily accounted for. For in any violent exertion of the muscles, as in running, the blood being precipitated with increased rapidity to the right side of the heart, the force and velocity of the circulation will necessarily be increased, and as a consequence respiration must also become accelerated. I conceive, therefore, that in Tetanus the frequency of the pulse and the hurried respiration must be, in a great de-

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gree, ascribed to the forcible contractions to which the muscles are excited, especially during the paroxysms. Yet the danger of the disease is not exactly proportionate to the intensity of the spasms, but is influenced, as will be shown hereafter, by the particular class of muscles affected. It is necessary also to notice, in an inquiry into the state of the pulse, that many of the remedies which are so often exhibited in large doses, may exert considerable influence in increasing the heart's action, as camphor, mercury, opium, and various stimulants. So that viewing all these circumstances, the condition of the pulse must be regarded as a very fallacious test of the severity or acuteness of the disease, and cannot therefore be depended upon as a guide in forming an accurate prognosis, Dr. Parry's rule being, in fact, neither sustained by experience, nor based upon any rational theory." 16.

It has been imagined that even the middle coat of arteries has been affected with the spasm—an opinion extremely improbable in itself, and supported only by a case of Mr. Liston's, which really proves nothing whatever.

The costiveness attendant upon tetanus, has led some authors to conceive that the muscular fibres of the intestines are involved. But this conjecture is of very dubious propriety, and there are many reasons, which we need not now enter on, why costiveness should occur, independently of spasm of the muscular coat of the bowel.

Retention of urine is sometimes occasioned, as in case 10, probably by spasm of the compressor urethræ, and great difficulty has thereby been experienced in the attempt to introduce a catheter for the purpose of evacuating the bladder. Mr. Morgan has seen priapism in tetanus. Mr. Curling never witnessed it, nor have we.

The muscles are observed to be relaxed during sleep, a striking example of which occurred to Mr. Mayo, in a boy who recovered from the disease. On visiting his patient before the symptoms were subdued, Mr. Mayo found him asleep, and remarked that he lay perfectly relaxed. The abdominal muscles were soft and yielding, and had not the least tension. The boy was awakened, and at the instant the full tension of the muscles returned. Not being further disturbed he fell asleep in a few minutes, when the muscles again became relaxed, and again, on his being awakened, resumed the state of spasm. Mr. Curling has, in several instances, seen the same thing. The fact is, as Mr. Curling remarks, that during the height of the disease, it appears impossible for sleep to occur, and it is in chronic tetanus, or during recovery from the acute, that sleep is likely to ensue. If, however, from exhaustion, or from the influence of powerful narcotics, sleep is obtained, it can last only till re-action enough is established to support the renewal of spasmodic contractions.

In tetanus the cutaneous secretion is increased, and has often a pungent and peculiar smell. It is singular that Baron Larrey should attach so much importance to the occurrence of perspiration, which, on the chest and abdomen, he describes as critical. We say that it is singular, because we constantly see tetanic patients bathed in sweat, without the slightest amelioration taking place.

The skin usually feels hot, and it appears that the heat of the body is sometimes above the natural standard. M. Prévost, of Geneva, had a patient, a boy twelve years of age, affected with Tetanus, which was accompanied by an extraordinary development of heat. A thermometer, placed in the axilla, was raised to 110° 75 Fahr. Reckoning the original tempera-

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ture at 98°, which is above the average for that age, there was an elevation of 12½° Fahr. In a case of traumatic Tetanus described by Dr. Bright, the temperature in the axilla on the third day was 105°. It is not surprising that the temperature should be raised. Violent muscular exercise, a quickened circulation from any cause, will do this. The actual mode in which the animal heat is generated, is so buried in obscurity, that conjectures on its alterations in a particular case are too often idle. In one case the condition of the circulating system appears to be its principal regulator. In another the nervous system plays as conspicuous and a more mysterious part. In a case of fracture of the spine, for example, which occurred at St. George's Hospital, the heat on the surface rose, we believe, to 110°. All we can do at present is, to watch and to record the facts.

Mode of Termination.

Tetanus may terminate in recovery, or it may not. When recovery does take place, it is very gradual. Of fifty-eight cases in the table, which terminated successfully, eight were cured in the course of a week; three in ten days; four in a fortnight; four recovered at the end of three weeks; fifteen at the end of a month; four after five weeks; eight after six weeks; three at the end of eight weeks; three after two months; and in two the symptoms were not removed till after three months. Even after the spasms have subsided, it is often a long time before the muscles can regain their tone and freedom of action. In cases 23 and 119, the muscles continued stiff for some length of time after recovery. In case 22, at the end of nine months after the patient first became affected, although enjoying good health, yet on catching cold he was still troubled with a stiffness about the jaws. In a case which Mr. Curling witnessed, rigidity of the muscles of the lower jaw continued for six months after the attack. In a case related by Dr. Currie, at the end of three years, it is stated that "his features retained the indelible impression of the disease." When we remember the soreness left by a bruise or a cramp, we cannot wonder at the effects of such violent contractions of the muscular fibre as occur in tetanus.

"The immediate cause of death from Tetanus is variously explained. The reasons for the opinion that it is attributable sometimes to a spasm seizing the heart have already been controverted. The ordinary causes are asphyxia, and exhaustion, and death is retarded or accelerated, according to the violence of the symptoms, the class of muscles principally affected, and the constitution of the patient. Asphyxia may be occasioned either by spasmodic closure of the glottis only, or by the spasms entirely suspending the regular action of the diaphragm, and of the other muscles concerned in increasing and diminishing the capacity of the thorax. When produced in the former way, death is somewhat sudden, occurring during a severe paroxysm, warning having perhaps been given by a sense of suffocation during a previous exacerbation. In the other case, death approaches slowly, the respiration being for several hours hurried, laborious, and irregular; the lungs become gradually congested, the motions of the chest being impeded, the expulsion of the inspired air is prevented, and thus a fatal termination tardily ensues. Often, however, the two causes acting together speedily put an end to the patient's sufferings. When death takes place from exhaustion, violent spasms, attended with profuse perspiration, have perhaps been prolonged through many days, or even weeks, the patient during that time having been unable to swallow nutriment. At length the paroxysms become less acute and

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frequent, the pulse flags, the muscles relax, the eyes become dim, and he gradually sinks, the vital powers being at length worn out by the severe and painfully protracted spasms." 26.

Tracheotomy has been recommended. Of course it could only be of use, where there is contraction of the glottis. When done it must be quickly done, and Mr. Curling does not know that it has ever actually been done. Probably it would be of little service, but as it might protract life and augment chances, it might, in proper cases, be resorted to.

Statistics of Tetanus.

"There are no data from which a correct estimate can be formed of the frequency of Tetanus in comparison with other diseases, of the probability of its occurrence after wounds, or of its mean rate of mortality, either in the traumatic form or in the idiopathic. Sir James Macgregor alludes to several hundred cases observed in the campaigns in Spain and Portugal, very few of which were cured. Mr. O'Beirne mentions, that out of about two hundred cases which he witnessed in the Peninsular war, not one recovered, and on a rough calculation it was generally considered to attack in the proportion of one in two hundred wounded. Tetanus must occur oftener amongst an equal number of wounded after a battle than in civil life, in consequence of the men being more exposed to the predisposing causes of the disease; on which account, and from the greater severity of the injuries, the majority of them being inflicted by fire-arms, the probability of recovery must also be much less. Mr. Howship has published the particulars of thirteen cases of Tetanus occurring after injuries of different severity, most of them being gun-shot wounds, of which ten were fatal. Sir Gilbert Blane mentions, that the number of wounded in the actions of April 1782 in the West Indies, was eight hundred and ten, of whom twenty, or one in forty and a half, were attacked with Tetanus, seventeen of which number died. Mr. Dickinson, surgeon at Grenada, met with thirteen cases of traumatic Tetanus; nine died and four were cured. He also witnessed ten cases of the idiopathic disease, of which six terminated fatally. In the table are included seventy fatal cases, from which it appears that the disease is equally fatal at every period of life, from the age of ten to forty-five." 29.

Idiopathic tetanus is well known not to be so fatal as the traumatic, but it is more so in hot climates than in temperate ones.

Tetanus is both less frequent and less fatal in the female sex than in the male. Of the one hundred and twenty-eight cases in the table, sixteen were females, being to the males in the proportion of one to eight. Of these sixteen cases four only were fatal, whereas, out of the one hundred and twelve cases of males, sixty-six, or more than one-half, died. Women are less exposed both to the predisposing and exciting causes of the disease. This would account for its infrequency in their sex. Its smaller rate of mortality, when it does occur, may possibly depend on their more delicate conformation, for the robust and muscular are most subject to it.

In most of the cases in the table, the patients were attacked between the ages of ten and fifty; four only having occurred after the fiftieth year, and three before the age of ten. The duration of the disease appears to be influenced by circumstances which we do not exactly understand. The extent of the original injury affects it. Sometimes it is very quickly fatal. Wepfer saw an infant, to whom tetanus proved fatal in three minutes; we may doubt if this was a pure instance of the disease. Another rapidly fatal case is mentioned by the late Professor Robison of Edinburgh. A negro having

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scratched his thumb with a piece of broken china, was seized with Tetanus, and in a quarter of an hour after this slight injury he was dead. In case 102, related in the Dictionnaire des Sciences Médicales, the disease proved fatal in twelve hours. In case 62, the patient died in twenty hours; in case 94, in twenty-six hours; and in cases 15, 53, and 96, in forty hours. Mr. Dickinson mentions an instance of a negro, twelve years of age, in which the disease ended fatally in twenty-two hours. In a case that occurred to Mr. Adams, of the London Hospital, the patient died in sixteen hours.

In the table, fifty-three cases were fatal within eight days after the appearance of symptoms; eleven by the following day; fifteen on the second day after, eight on the third, seven on the fourth, three on the fifth, four on the sixth, three on the seventh, and two on the eighth, but very few having lasted longer. In case forty-two, which is taken from Morgagni, the symptoms are related to have continued for upwards of twenty days before the patient was destroyed. The experience of Dr. Lionel Chalmers in acute idiopathic tetanus in South Carolina, accords very closely with the average duration of the traumatic disease, as estimated from the table. He states, that patients generally die in twenty-four, thirty-six, or forty-eight hours, and very rarely survive the third day, but when the disease is less acute, few are lost after the ninth or eleventh day.

Causes of Tetanus.

When we say that traumatic tetanus has been seen to follow almost every kind of injury, almost all operations, even cupping, the drawing of a tooth, or the injection of a hydrocele, we have given a summary of what is known on these matters. It is said to occur most frequently after punctures and lacerations of fascious structures and of nerves, and after wounds of the hands and feet. It appears from the table, that in thirty-four instances the disease was occasioned by injuries, many of them very trivial, of the hands and fingers; and in thirty-five cases by injuries to the feet or toes. In sixty-four instances, the wounds were on some part of the lower extremities, in forty-six, on the upper extremities. Mr. O'Beirne mentions, that he never witnessed the disease after an injury of the head, but in eleven cases in the table, the wounds were either on the face or scalp. Dr. Morrison notices three cases in negroes, where it originated from a severe flagellation. Baron Larrey has recorded an instance in which the disease was produced by a fish-bone lodged in the fauces. Mr. Morgan witnessed two cases, consequent upon the blows inflicted by a schoolmaster with his cane,—they both terminated fatally. Dr. Rush remarked that there was invariably an absence of inflammation in the wounds causing the disease. In many of the cases in the table, the wound was healed, and almost forgotten.

The interval between the infliction of the injury and the accession of tetanic symptoms varies considerably. In the case mentioned on the authority of Professor Robison, the disease appeared almost instantaneously. In case 114, only an hour elapsed. In case 102, symptoms were evinced within two hours after the injury; and in case 19, in eleven hours. In eighty-one instances, symptoms were first developed from the fourth to the fourteenth day after the wound; and in nineteen they were evinced on the tenth day. In thirteen cases, witnessed by Mr. Dickinson, at Grenada, the period varied from eight to fourteen days.

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The longer the interval, the more chronic the disease, and, consequently, the greater the chance of recovery. In thirteen cases, symptoms of tetanus occurred about three weeks after the wound, but four only were fatal; and of seven cases, in which they did not make their appearance till after a month, only two ended fatally. In the returns made by Sir James Macgregor, the interval never exceeded three weeks, and in all the cases witnessed by Sir Benjamin Brodie, with one exception, the disease showed itself in the course of the second week after the reception of the wound. In that particular case, the symptoms were developed on the seventeenth day, but they were chronic, and the patient recovered. Sir Gilbert Blane, who had numerous opportunities of observing the disease in the navy, states that he has known it commence at all periods, from the second day to the end of the fourth week. Mr. Ward, of Manchester, saw it follow ten weeks after a burn. Was that traumatic tetanus?

Tetanus is more frequent in sultry than in temperate climates—prevails in hot seasons, or during sudden changes from heat to cold, especially in a moist state of atmosphere—and is apt to follow exposure to damp and cold. Dr. R. Huck, physician to the army in the last century, states that, of thirteen wounded men whom he had seen afflicted with lock-jaw, nine received their wounds at the attack of the French lines at Ticonderoga, in the year 1758, and remained exposed to the cold air, the night after the action, in open boats upon Lake George. M. François, of Auxerre, observes, that on board the Amazon frigate, before Charles Town, during the American war, after some stormy and very wet weather which had succeeded a continuance of dry, most of those wounded by fire-arms were attacked with Tetanus on the fourteenth day. Dr. Hennen states, that in almost all instances the patients had been exposed to a stream of air directly blowing upon them. He mentions, that many of the wounded were seized with it after the battle of El-Arich, and after the capture of Jaffa, when they were placed in tents on the wet ground exposed to constant rain. Baron Larrey noticed, that the disease was unfrequent during an equable temperature, but common when the wounded were exposed during the night to the immediate impression of cold and damp air. The cold bath, and drinking cold water when heated have brought it on, in short the efficiency of cold in producing both idiopathic and traumatic tetanus is established.

In a note we are informed of some striking facts with regard to the production of tetanus in the horse. Thus Hurtrel d'Arboval relates, that twenty-four horses were castrated on the same day at Bec, in the department de l'Eure. They were afterwards led four times in the day through a pond of water supplied from a very cold spring. Sixteen of them died between the tenth and fifteenth day after the operation. At Rennes, a horse after castration was exercised until he was covered with perspiration, and then suddenly plunged into the river. This was repeated three times, and the animal died tetanic. Tetanus is frequent in horses, occurs sometimes in lambs, and has been seen in parrots. It is rarely idiopathic in horses, and in them the traumatic is not so fatal as in man, the average of recoveries being rated by Mr. Sewel at three in five.

Tetanus is common in the West Indies, where the Negroes suffer more than the whites, probably because they are more exposed. The disease, however, is not so common in the islands as it was. That it is not so fre-

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quent in the navy will be evident, when we state that Dr. Lind, who was physician to the fleet, about the middle of the last century, has recorded, that after amputation, five cases out of six generally proved fatal from an attack of lock-jaw!

On the prognosis and diagnosis we need not dwell. With respect to the former it is enough to say that, even in the worst forms recoveries do take place, and that in chronic tetanus they are still more common.

PATHOLOGY OF TETANUS.

This occupies the second chapter. Our author considers, first, the morbid appearances of Tetanus; secondly, the theory of the disease. The morbid appearances are considered under the heads: Lesions of the Nervous System—Lesions of the Muscular System—Lesions of the Viscera and other parts of the Body.

1. *Lesions of the Nervous System.*

The first part of this system investigated is the brain, spinal cord, and their investing membranes. The changes of these structures are so dubious and so vague, that we shall not dwell much on them.

The principal alterations of the brain and its membranes found after death from Tetanus are:—congestion of the sinuses; the vessels of the pia-mater filled with florid blood; more or less increased vascularity of the cerebral substance; slight serous effusion between the membranes and in the ventricles.

"In some rare instances changes of a permanent nature have been observed. Bouillaud relates the case of a boy who had during life symptoms simulating Tetanus, in which a tubercle the size of a large egg, and five or six smaller ones, were found after death in the substance of the right hemisphere. In a fatal case of Tetanus, described by Dr. Bright in his Medical Reports, (case 39,) in which the symptoms appeared at the end of four weeks after a blow on the left side of the head, on examination after death, a collection of pus about the extent of a large nutmeg, was found in the substance of the brain about the middle of the middle lobe, close to the part where the blow had been received. This pus was contained in a firm cyst as thick as cartridge paper, exceedingly vascular, and almost made up of minute vessels: the cyst adhered to the dura mater, and seemed not improbably to be formed originally from a fold of the pia mater." 47.

When we turn to the medulla and its membranes, we find that serous effusion, with increased vascularity, is generally observed in the latter, and a turgid condition of the blood-vessels about the origin of the nerves. Yet, in many recorded cases, the spinal marrow and its coverings were natural. This was the fact in the examinations made by Sir Benjamin Brodie.

It is curious that, vague as these appearances are, incompetent as they must be to establish the existence of active inflammation, there have yet been many, especially abroad, to insist that inflammation of the brain, or spinal cord, or their membranes, is the essential cause of tetanus. The explanation must be sought in the disposition on the part of many to link all serious functional disorders with positive organic lesions, and on an imperfect acquaintance with the broad facts of pathology. Mr. Curling goes into an elaborate argument to shake the inflammatory hypothesis we have alluded to, but we do not consider it necessary to pursue him.

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We must not forget to observe that actual inflammation of the spinal cord or of its membranes may occasion tetanus. This is not surprising. We have seen lesions of the brain give rise to it—we shall see lesions of the nerves occasion it—in the majority of instances mere functional disturbance or some very subtle change indeed of the nervous system produces it—and we cannot wonder if inflammation of the cord should do so. But such cases must be separated from the ordinary instances of tetanus, from which they differ in symptoms, as pathology. Take an example of tetanus from inflammation of the cord.

Case. A boy was struck on the back part of the neck by a shutter falling upon him, and was picked up insensible. On the following day symptoms of tetanus showed themselves, accompanied with a hot and dry state of the skin, the bladder became paralysed, the fæces passed involuntarily, and he died on the fourth day after the accident.—On examining the body, it was found that the cervical portion of the spinal cord, to the extent of an inch, had undergone considerable softening, and that the membranes covering this portion were inflamed and much thickened.

Sir B. Brodie has seen three cases of opisthotonos following injuries of the head, in all of which matter was found on the medulla oblongata. Other instances of inflammatory tetanus have been related, and are quoted by our author, but it is unnecessary to refer to them.

"In some few instances blood has been found extravasated within the spinal sheath. This was noticed in a case of idiopathic Tetanus recorded by Dr. Funk. The effusion extended from the first dorsal vertebra to the lower part of the canal, being greatest in the lumbar region. It is stated, that the surface of the cord was rose red—the origins of the nerves swelled—and the cauda equina much reddened. In another case, of traumatic Tetanus in a female, mentioned by the same author, a similar appearance was observed." 63.

Other morbid changes of an anomalous character have been reported. In a child, aged between 3 and 4 years, who died in the Hôpital des Enfans Trouvés at Paris, with symptoms of opisthotonos, trismus, difficult deglutition, and coma, Ollivier discovered deposition of a red and very consistent fluid in the cellular texture between the dura mater of the cord and the bony canal of the spine in the dorsal region, serous effusion within the membranes, and the arachnoid of the medulla covered with an albuminous concretion for four inches. In a man, a large quantity of viscid yellow serum was found under the outer covering of the spinal cord. In the museum of St. Thomas's Hospital there are two preparations of bony and cartilaginous deposits beneath the arachnoid covering the medulla spinalis, in the dorsal and lumbar regions, distinct, small in size, and of the thinness of paper, which are described as having been taken from the bodies of patients who had died of tetanus. In case 94, a number of small bony patches were observed on the pia mater of the cord. In case 96, three small laminæ of bone were found on the dorsal division of the cord. Mr. Travers has often found such deposits. Our author has never found them. It is clear enough that they are not essential, though possibly, they may predispose to the occurrence of tetanus.

Such, then, is the morbid anatomy of the brain and spinal cord, so far as this disease is concerned. Nothing can be more vague. What we find

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is just enough to convince us that it is not necessary to find any thing. In the mass of cases, the only alteration is probably one of the vascular system of the brain and cord, an alteration which leaves no material traces after death, and is little under our control during the patient's life.

The Sympathetic System.

Mr. Swan, Dr. Aroussohn, of Strasbourg, Andral, and M. Dupuy, have directed attention to the state of the cervical ganglia of the sympathetic. They have found, or thought them inflamed. These appearances are even more suspicious than those of the brain and of the cord.

The Nerves immediately connected with the Seat of Injury.

There can be no doubt that, in numerous instances, the nerves of the injured part have been found inflamed or altered in their organization. This is a point of some little practical consequence, because whatever tends to localize the cause of the disorder is, of course, important. We quote the following summary of stated facts.

"In case 5, on examining the wound at the back part of the thigh, which was inflicted by a spike that had penetrated deeply into the semitendinosus muscle, driving a piece of wadding before it, I found the sciatic nerve, which passed close to the bottom of the wound, highly injected with blood. In case 4, I traced the internal plantar nerve to the wound, which was occasioned by a compound dislocation of the great toe, where it appeared thickened, and its neurilema unusually vascular. In the dissection of a patient of Mr. Ewbank, who had died of Tetanus after a wound of the leg by a pitchfork, the prong was found to have penetrated to the peroneal nerve, which was bruised, and implicated in the inflammation set up in the part. In case 64, after a laceration of the hand, which was amputated by Mr. Liston as soon as the tetanic symptoms made their appearance, the branch of the median nerve, going to supply the thumb, was found torn two-thirds across, and its extremity inflamed and thickened for nearly an inch. On dissecting the stump of a young officer, who died of Tetanus after the amputation of his arm, Baron Larrey and M. Ribes found the median nerve included in the ligature upon the artery, and its extremity swollen and red. In another case, mentioned by Larrey, the disease was consequent upon a wound by a bullet, which had passed through the internal and posterior part of the arm of a French general, cutting across the radial and internal cutaneous nerves and a portion of the biceps. Baron Dupuytren discovered, in the arm of a boy who died of Tetanus, a few days after being struck by a coachman, a portion of a whip enveloped in the very substance of the cubital nerve. In case 89, the internal plantar nerve, before it divided into the two branches which supply the great toe and the toe next to it, was completely torn through, and each extremity of the nerve was bulbous and vascular: every other part of the nerve appeared perfectly healthy. In case 13, the plantar branch of the tibial nerve was involved in the wound. Dr. Hennen mentions that in one case he found the radial nerve, connected with the injury, thickened, and a spiculum of bone sticking in it. Mr. Morgan found, on dissecting the thumb, in a case of Tetanus, two pieces of splintered teak, imbedded in the abductor muscle, and resting upon a branch of the radial nerve, without any appearance of inflammation in the part. In another case the sheath of the nerves supplying the injured part was highly inflamed." 68.

It is to be observed that injection of a nerve or of its cellular sheath, where neighbouring tissues are inflamed also, as after compound fractures, can hardly be considered satisfactory. Similar injection has been found,

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and no doubt would be often found, in cases where tetanus has not occurred at all. But where the nerve is actually thickened, or positively implicated in some way or other, the evidence is more satisfactory, and the fact deserves attention.

M. le Pelletier, chief surgeon at the Hospital at Mans, has communicated to the Royal Academy at Paris, a memoir in which he has attempted to show, that in all cases tetanus originates in inflammation extending from the neurilema of the nerves of the part injured to the membranes or substance of the medulla spinalis. In a case where tetanus occurred, after a compound fracture of the humerus, he found the neurilema of the cubital and median nerves red and inflamed, as also the envelopes of the brain and spinal marrow; and it was remarkable, that the appearances of inflammatory action were confined to the left side of these membranes, being the side corresponding with the arm that was fractured. This gentleman relates two other cases of a similar description, and further instances are referred to by Mr. Curling. But he very properly objects to receiving increase of vascularity, itself very dubious, as conclusive evidence of inflammatory action. In fact, in the case of the nerves, as of the nervous centres, we are under the necessity of owning, that the positive facts are few and far between, and that their rarity tends to throw a doubt upon their own importance.

II. *Lesions of the Muscular System.*

The violence of the muscular contractions would be thought likely, à priori, to give rise occasionally to their rupture. Such is actually the case.

"We find that in case 28 the fibres of the psoas magnus were discovered after death lacerated and soft, blood being effused on the surface of this muscle and in the sheath of the recti-abdominis, the fibres of which were also torn and quite soft. In case 4, an account of which will be found at a subsequent page of this essay, I found, after death, that about half the fibres of the lower division of the rectus abdominis on the left side had been ruptured, the upper portion of the lacerated muscle being retracted, swollen, and hard. Several of the fibres of the right rectus were also torn in the same situation. A little extravasated blood was found in the sheath of these muscles at the seat of the rupture, which most probably took place in an acute and painful paroxysm that occurred just previous to dissolution. Baron Larrey relates the particulars of a very acute case of traumatic Tetanus, in which, during life, at the moment that the patient was plunged into a cold bath, a tumour, of the size of a hen's egg, was suddenly produced on one side of the linea alba below the umbilicus. It terminated fatally; and, on dissection, the right rectus muscle was found completely ruptured; and the swelling, which did not disappear after death, was formed by the upper portion of the muscle being retracted and turned in upon itself. Below this a rent was perceived filled with dark-coloured coagulated blood. The rupture had evidently taken place in the severe paroxysm induced by sudden immersion in cold water." 76.

The spasmodic contractions of the muscles have even caused fracture and dislocation of the bones. Desportes gives a case where both thighs were broken by the powerful action of the flexor muscles during a momentary remission of the extensors; and in a case mentioned by Fournier-Pescay, the spasms are said to have occasioned a dislocation of the second cervical vertebra.

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III. *Lesions of the Viscera and other Parts of the Body.*

The lungs are often found gorged with blood, and sometimes in a state of *engouement*. The asphyxia which so frequently cuts off the patient accounts for these phenomena.

In all the cases in which Mr. Swan found unusual appearances in the sympathetic system, there was increased vascularity, and an inflammatory state of the mucous membrane of the alimentary canal. Dr. M'Arthur has published the details of four fatal cases of tetanus, in the dissection of which he discovered inflammation of the stomach and of the intestines. Andral relates a case, in which, on dissection, he found unequivocal marks of gastritis. In many cases worms have been found in the intestinal canal—ascarides sometimes, but more frequently lumbrici. In all probability the occurrence was accidental, yet they may be sought in investigations after death.

Enlargement of the papillæ maximæ at the root of the tongue and injection of the mucous membrane of the larynx, the pharynx, and œsophagus, are not unfrequent appearances in tetanus as in hydrophobia. The spasms and irritation of the parts explain, or seem to explain them.

The consideration of the theory of tetanus occupies forty-four pages. They shew what that theory is not—what it is they leave as unexplained a mystery as ever. We need not dodge the devious spirit of speculation, nor mention hypotheses for the mere purpose of exhibiting their hollowness. There are only two points, themselves scarcely theoretical, to which we consider it necessary to allude. They are the following.

1. It is a popular belief that wounds of the hands and feet are more likely to occasion tetanus, than when inflicted on other parts of the body. The reason has been supposed to be, that these parts are liberally supplied with nerves possessed of extreme sensibility. Now in the cases in the table it appears, that the original wound was on some part of the extremities in 110 instances, and in 69 either on the hands or on the feet. But it must be remembered that these parts are particularly exposed to injury. A numerical statement is presented of the location of a certain number of accidents treated at the London Hospital between the 23d of June, 1836, and the 26th of August in the same year. Of 510 cases, 193 were injuries on the upper extremities—124 injuries on the lower—86 wounds on the head —107 injuries to other parts of the body. Whatever influence may be exerted by the nerves of the part, it is certain that large nerves may be injured without the supervention of tetanus, and the liability to this is by no means in the ratio of the severity of the wound. Very severe ones may not occasion it, and the most trivial ones may.

2. It is an object of some moment to determine, if it be possible, when the disease becomes independent of its local exciting cause. Unfortunately, in the case of tetanus, as of hydrophobia, the period at which the irritation *has been* transmitted to the nervous centre, or the poison actually absorbed is little more than vague conjecture. On the one hand, we know that when tetanic symptoms have commenced, amputation, excision of the wounds, &c. have been often ineffectually performed—and, on the other hand, we have such a case as the one detailed by Mr. Travers. That gentleman states, that a man who had suffered amputation of the leg, above the knee, was attacked

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with violent tetanic spasms. These increased, until it was deemed expedient to open the stump and examine the ligatures, when it was discovered that the anterior crural nerve had been included in one of them: it was removed, when the spasms gradually subsided, and the man did well. Larrey mentions some similar cases, but the latter, perhaps unjustly, is scarcely deemed a very safe authority.

We now jump to a summary of what has either been established, or is probable in the way of theory. Yet we hardly know if the term theory will apply to some of the following deductions which constitute the summary in question.

"I am induced," says Mr. Curling, "to infer:—

1. That Tetanus is a functional disease of the nervous system, that is to say, a disease unaccompanied with any perceptible lesion of structure, the nature of which, although essentially distinct from inflammation, is completely unknown. There are, therefore, no morbid changes peculiar to Tetanus, and by which it can be recognised.

2. That the seat of this peculiar morbid action, termed *tetanic irritation*, is the *tractus motorius*, on either side, wholly or in part, the superior being the portion most generally affected.

3. That the result of tetanic irritation in the tractus motorius, or medulla, is a supply to the muscles of a stimulus to abnormal action, which, although limited to the muscles subservient to the will, is, nevertheless, totally without its control.

4. That tetanic irritation is excited in two ways; *first*, by a noxious impression propagated to the medulla from distant nerves, (most probably sentient) which impression may be caused by a wound, cold, or any other source of irritation; *secondly*, by inflammation in the brain, spinal cord, or their investing membranes, either idiopathic or occasioned by direct injury to these structures, or extending continuously from the nerves of a wounded part of the medulla. Traumatic Tetanus, commonly arises in the first way, its origin in direct injury to the cord, or in inflammation extending from an injured nerve, being exceedingly rare.

5. That, in pure traumatic Tetanus, the primary impression is confined for an indefinite time to the nerves of the part injured, being transmitted at some subsequent period to the medulla, and thus exciting the disease.

6. That when tetanic irritation is once fully excited in the medulla, which is made manifest by spasmodic contractions in the muscles, the disease is independent of the exciting cause, and does not cease upon its removal.

7. That the nervous system in some individuals is more disposed to take on this morbid action than in others, and that, as a general rule, males are more susceptible of it than females and negroes than whites.

8. That certain morbid states, as disorders of the digestive organs, the influence of particular climates, and a deleterious atmosphere, render the system more susceptible of this disease.

9. That the derangement of the vital organs in Tetanus is the result of the inordinate action of the voluntary muscles induced by the disease, the disturbance and suspension of different functions, and even fatal exhaustion, being chiefly, if not solely, referrible to the violent muscular contractions. In fact, the tetanic irritation directly interferes with, or affects, no organ nor part whatever besides the system of the voluntary muscles.

10. That tetanic irritation often gives rise to a determination of blood to the cord and its meninges, and to the nerves proceeding from the site of the wound and to the affected muscles, the result of which, in the medulla, is an increase in the natural secretion of the arachnoid. The minute vascular injection of the

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cord and of the nerves, together with the serous effusion at the base of the brain and between the spinal membranes, being therefore nothing more than occasional effects of the disease, are by no means constantly present after death." 123.

TREATMENT OF TETANUS.

A statistical view of the treatment of tetanus is not so useless as, at first sight, it may appear. Such a view shews what has been done, and what has not been done—what has proved of some advantage, and what has proved of none. But it cannot be received as offering the means of establishing any ratio of benefit from remedies, for there can be little doubt, that the unsuccessful cases have not been duly published. If a remedy has succeeded or appeared to succeed, the case has, no doubt, been placed on record. If the same remedy has failed, the details have, too often, never seen the light.

1. *Cure without any Treatment.*

This has occurred. It is wonderful, not because there was a cure, but because there was no treatment. Probably a fair proportion of the cures *with* treatment have been in spite of it. But to return. Dr. Morrison notices a well-authenticated instance of a negro, who recovered from the disease without having recourse to any remedies. Mr. Morgan mentions a case that occurred at Guy's Hospital, in which, although the patient was left entirely to nature, the disease ran its course, and eventually the man recovered; and Sir Astley Cooper states, in his lectures, that he has seen similar cases.

2. *Treatment of the Premonitory Symptoms.*

It is important to recognize the premonitory symptoms of tetanus, because it is possible we may exercise a control over them, which we have not over the disease when it is established. What are those premonitory symptoms?

Twitchings of the muscles of the affected limb, a degree of lassitude, restlessness, great depression of spirits, and an uneasy sensation about the præcordia, are often observed previous to its development. But the most common precursors of both forms of tetanus are cold chills, and an uneasiness about the throat, leading the patient to imagine that he has caught cold. These latter symptoms are frequent enough to render it important for the surgeon to bear them in mind when attending the subjects of injuries, especially the wounded after a battle.

It is better to be on the safe side and to regard such symptoms with suspicion.

3. *Local Treatment.*

The disease being the consequence of local irritation it was natural to think that the removal of it would remove, or tend to remove its effect. The means adopted may be looked upon as essentially two: 1. Amputation or excision of the wounded part; 2. Division of the nerves proceeding to the seat of injury.

Amputation.

It is obvious that the earlier this is performed the better must be the chance from it. It was resorted to in eleven of the cases in the table, seven of

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which were cured. In case 14, it was employed in conjunction with tobacco soon after the symptoms were fully established. In case 23, related by Mr. White, of Manchester, the symptoms were somewhat advanced, severe but chronic, and opium was freely employed. In case 55, the original wound was of itself sufficiently severe to demand amputation; the operation was performed on the day after the appearance of symptoms, and it is stated that "the tetanic symptoms were evidently kept under and finally removed, chiefly by the use of opium." In case 61, the symptoms were exceedingly severe. The particulars of it are recorded by Mr. Wayte, a surgeon at Calne. The patient was a boy, eight years of age, and on the day after the appearance of tetanus, which was consequent upon a severe burn on the arm from lime, the limb was amputated. The symptoms subsided gradually but uninterruptedly, and, in little more than a month, he was perfectly recovered. No other remedies were employed, except one anodyne draught before the appearance of tetanus, and occasionally a mild purge. In case 77, treated by Mr. Howship, the primary wound was a severe injury to the elbow-joint, the symptoms having been mild, and of slow access, and not well marked, and amputation was not resorted to till the third day after they appeared. Case 99 is the instance alluded to by Larrey. In case 119, the patient was a female, and the operation was not resorted to till the thirteenth day after the attack, when the symptoms were subsiding under the influence of opium. Dr. Huck, physician to the army in the year 1758, in a case of tetanus occurring after a fracture of the metacarpal bone that sustains the forefinger, by a musket ball, on the day following the appearance of trismus, amputated the finger, and removed the sharp points of the remainder of the metacarpal bone. Opium was afterwards given, and the patient recovered.

These cases, tend rather to favour the practice of amputation of the injured part. Yet there are many facts of an opposite tendency to be arrayed against them. Sir James M'Gregor mentions, that after the battle of Toulouse amputation was extensively resorted to without affording relief; and Dr. Hennen and Mr. Guthrie were equally unsuccessful with the same method of treatment. Dupuytren strongly objects to the performance of amputation; and Sir Astley Cooper alludes to the trial of it in three instances, which were all fatal. Mr. Grimstone mentions two cases where amputation was performed on the first appearance of symptoms, but they terminated fatally. Sir Benjamin Brodie unintentionally made the experiment of amputation on a boy who was admitted into St. George's Hospital with compound fracture of the leg, which was followed by gangrene of the limb. The operation was performed while the gangrene was spreading; but subsequently it was ascertained, that the patient had complained of the premonitory symptoms of tetanus the morning before the operation. The disease was rapidly developed after the limb was removed, and the boy died in less than twenty-four hours. We witnessed this latter case, and another in St. George's Hospital, where amputation of the thumb was performed without advantage, after the commencement of the tetanus. On the whole, it must be owned that the balance of evidence is against the operation.

Division of the Nerves.

This was first practised with success by Mr. G. Hicks, surgeon of Baldock,

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in 1797. The case was one of trismus, not acute, which followed a contusion in the palm of the hand. The issue was successful. Two other successful cases are detailed by Baron Larrey, and another by Dr. Murray. These four are the only unexceptionable cases in which, so far as our author knows, the operation was performed. They do not prove much, but the practice merits in appropriate cases further trials.

4. *Constitutional Treatment.*

A. *Purgatives.*—These have been much used, partly because there is usually obstinate constipation—partly because depraved secretions have been brought away by them. The purgatives have been of all kinds. In case 48, a single drop of croton oil procured copious evacuations. In case 27 two drachms of calomel, sixteen drachms of jalap, and fifteen grains of scammony, were taken, but the bowels were not relieved for three days; and afterwards, forty grains of calomel, fifty-one grains of the extract of colocynth, and thirty-eight of gamboge, were taken daily during nine days, in order to keep up their action.

After purgatives have been employed, depletion and all kinds of sedatives and antispasmodics have been liberally had recourse to. We all know what they have failed to do. Mr. Curling treats separately of some of the remedies that have enjoyed most reputation.

B. *Mercury.*—This was first recommended by Mr. Donald Monro, on the authority of a physician who had used it with great success for idiopathic tetanus in the West Indies. Yet the evidence of Sir James M'Gregor, Baron Larrey, Dr. Wells, &c. is against it. Mr. Curling saw it tried without the least benefit in two cases, in both of which much suffering was occasioned by the salivation. Of fifty-three cases in the table, where mercury was employed, thirty-one proved fatal. Of the twenty-two cases which recovered, in case 57 it is mentioned, that although salivation was produced, the symptoms continued to increase until the quantity of opium was augmented. In case 80 mercury was not resorted to until the disease had been established seventeen days; and in another, case 90, the patient was improving before ptyalism was produced. In twenty of these cases of recovery opium was combined with this remedy; and of the two treated without it, in one tobacco injections were employed. Six of the cases also were of females. In eleven of the cases, in which neither opium nor tobacco was resorted to, the mercury being given alone, or employed in conjunction with some trivial remedy, as the warm bath or blisters, *all were fatal* except one. Twelve cases of tetanus, consequent upon severe injuries, are related by Mr. Howship in the London Medical and Physical Journal, in all of which mercury was freely exhibited. Two only recovered, and in both of them it was given in conjunction with opium. This evidence is pretty unequivocal against it. When tetanus depends on inflammation of the cord or of its membranes, mercury combined with opium, becomes a very proper remedy.

C. *Blood-letting.*—This is proper enough where the symptoms are decidedly inflammatory. Where they are not, facts are on the whole against its employment. Mr. Guthrie tried venesection in three cases of traumatic

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tetanus. In one, in which the disease had advanced with rapidity, the patient was bled nearly *ad deliquium* several times with good effect, calomel and diaphoretics being given at the same time: he recovered. In the second case, the patient was bled in the same manner, with an evident amendment of the symptoms, when he was seized with diarrhœa, which, in his debilitated state, carried him off. In a third case of a man of sanguine temperament, and suffering from acute tetanus, venesection, pushed to the utmost, totally failed. Of twenty-six of the cases, in which blood was abstracted and other remedies also resorted to, thirteen died. Two other cases in the table, unattended with inflammatory symptoms, were treated by bleedings alone; both terminated fatally. In case 28, the pulse was full and strong, beating about 140 in a minute, Mr. Earle bled the patient repeatedly, and, after every venesection, there was decided remission of the spasms. The blood was remarkably buffed and cupped; he seemed to be in a fair way for recovery, when the disease was, upon two occasions, aggravated by the friends giving him, most injudiciously, wine and porter. He died afterwards, apparently from exhaustion.

Loss of blood appears to favour the operation of medicines in this disease, as in other affections. Thus, in case 87, the patient being of a full plethoric habit, bleeding seemed to assist the action of opium. If blood-letting is to be resorted to at all, it should be in appropriate cases, and at an appropriate time. But it is a dangerous remedy.

D. *Counter-irritation.*—Unless the case is inflammatory, this is of no service, and plagues the patient.

E. *Opium.*—It is unnecessary so say how much this has been used. Opium, in various forms, and in conjunction with other remedies, was employed, in eighty-four of the cases in the table, being more than two-thirds of the whole number. Of these, forty-five recovered, of which ten were females. Yet there can be no doubt that the confidence of surgeons in its powers is not great. The quantities that have been given in particular cases are not trifling.

"In Tetanus, as well as in hydrophobia and delirium tremens, there appears to be a conventional license for the unlimited exhibition of opium. A drachm, and two drachms of laudanum, or a scruple of the solid opium every three or four hours, are ordinary doses. In a case related by Mr. Leath, in the London Medical and Physical Journal, ninety-nine ounces, seven drachms of laudanum, were taken in little more than a month, the quantity exhibited in the course of the twenty-four hours for eleven days having been three ounces, six drachms. Begin, in his Traité de Therapeutique, relates that M. Blaise, in a case of Tetanus, administered in ten days four pounds, seven ounces, and six drachms of laudanum, and six ounces, four drachms, and forty-five grains of solid opium! It cannot but excite surprise that such enormous doses of this drug, both in substance and in solution, should have been taken internally in these cases, without in the slightest degree controlling the symptoms of the disease, or producing upon the system any of its ordinary effects. There is, however, reason to believe that these large doses have not always been received into the system. Mr. Abernethy, on opening the stomach of a patient who had died of Tetanus, after taking largely of opium, found thirty drachms of this substance undissolved in the stomach. In two fatal cases of delirium tremens I found in the stomach of

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each patient after death several drachms of laudanum and opiate pills, obviously unchanged or unacted upon." 152.

Where opium cannot be swallowed, it may be exhibited in the shape of glyster. Dr. Latham has recommended Dover's powder. Dr. Stutz, of Suabia, has cured three cases by opium combined with alkalies, and warm baths impregnated with the deutoxyde of potassium and lime.

F. *Tobacco.*—There appears to be stronger evidence in favour of this, than of any other remedy. Mr. O'Beirne has particularly insisted on its efficacy.

"Of nineteen cases in the table, in which tobacco was employed, nine recovered. Of the ten fatal cases it must be remarked, that in case 20 the remedy was not resorted to till the patient was dying. In case 28, treated by Mr. Earle, and in case 49, the case of Dr. Anderson's just alluded to, it would appear that this remedy was not fairly tried. In case 39, there was organic disease in the brain, and in case 52 the symptoms were always moderated after the injections; but the patient was not kept constantly under its influence. Case 53 was remarkably severe, the disease having proved fatal in forty hours, and the remedy was scarcely resorted to in time. In neither of the two cases (cases 105 and 106) treated by Mr. Carmichael, does it appear that the tobacco was exhibited to an extent sufficient to produce that powerful impression upon the system by which alone the spasms in the acuter forms of the disease can be combated." 168.

Two other cases were watched by our author at the London Hospital. In the first the patient died from the depressing influence of the narcotic. In the second he died asphyxiated. The latter was on several accounts not a fair case. In the former sufficient caution was not used. On the whole, Mr. Curling remarks that he has not succeeded in finding a single case, in which, being fully and fairly tried before the powers of the constitution had given way, it has been known to fail. Of course great care must be used in exhibiting this powerful drug. Its dose must be proportioned to the age, strength, and state of the patient, and its depressing influence should be counteracted by appropriate stimulants.

G. *Antimony.*—Of ten cases in the table in which it was resorted to, six were fatal, but in these the disease was very acute. In a case of chronic tetanus treated by Mr. Liston, it seemed serviceable, as it did in a case of idiopathic tetanus detailed by Mr. Woodward.

H. *Cold Affusion.*—This was first recommended by Hippocrates—has been much practised in the West Indies—and has met with a certain degree of favour from many surgeons. Its effects are by no means slight. The immediate consequence is often a severe and sudden exacerbation of the spasms, as in case 46, which sometimes proves fatal, as in an instance recorded by Baron Larrey. Mr. Morgan likewise mentions a case, where the patient was plunged, by his own desire, into a cold bath; all the symptoms of tetanus disappeared in a moment, and he was almost instantly taken out lifeless. The shock produced on the system, by the impression of cold upon the surface of the body, had occasioned instant death. In a severe case of

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tetanus, described by Dr. Currie, the patient was plunged into cold water, at 36° Fahr. When taken out the pulse and respiration were almost entirely suspended. Warm blankets, however, had been prepared, and general friction was diligently employed. The respiration and pulse became regular, the vital heat returned, the muscles continued free from spasm, and the patient fell into a deep sleep. In this case a single impression was sufficient to arrest the disease. In case 120, its immediate effect was to suppress respiration and to extinguish the pulse at the wrist and the heat of the surface of the body. In case 90, during its operation, the pulse was reduced from 150 to 90.

The evidence in favour of the cold affusion refers chiefly to idiopathic tetanus. Mr. Samuel Cooper says that it presents no hope of benefit in cases of traumatic tetanus. But Mr. Samuel Cooper is clearly wrong, for not only *may* hope be indulged from its use, but it has actually effected, or seemed to effect a cure. Thus Sir Benjamin Brodie has seen it of more use than any other remedy. Of twelve cases in the table, in which cold affusion and other means were adopted, seven terminated favourably. Independently of those cases, three others have been collected by our author, in which cold affusion was of signal service, the patient in each instance recovering. A case communicated to Sir James M'Gregor by Mr. Nixon, Deputy Inspector of Hospitals, appears to illustrate the sedative and beneficial influence of cold. It occurred in the march of the guards through Gallicia.—The symptoms of tetanus arose from a slight wound of the finger, and are stated to have been unusually severe. As it was impossible to think of leaving the man in the wretched village where he was attacked by the disease, he was carried on a bullock-car after the battalion. During the first part of the day he was drenched with rain, the thermometer standing at 52°, but, after ascending one of the highest mountains in Gallicia, the snow was knee deep, and the thermometer below 30°. The patient was exposed to this inclement weather from six o'clock in the morning till ten at night, when he arrived, half starved to death, but perfectly free from every symptom of tetanus. This man was, therefore, solely indebted for his recovery to the sedative influence of intense cold, to which he was accidentally subjected.

I. *The Warm Bath.*—This appears to be useless, if not dangerous in acute cases, may be serviceable in chronic, and has been beneficial in removing the muscular stiffness left after tetanus.

K. *The Vapour Bath.*—This would seem to have been successful in two out of three cases reported by Dr. Marsh of Dublin, and in two cases related in the Journal Hebdomadaire.

L. *Tonics and Stimulants.*—In the exhaustion occasioned by tobacco, or indeed by the disease, these are serviceable, nay, necessary. The extent to which they may be carried, if not required, is shewn in a case related by Dr. Currie of Liverpool. A gentleman was seized with tetanus, which was excited by a splinter having been driven under the nail of his middle finger. In less than a month, he drank, mixed with nourishment, 140

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bottles of Madeira wine, finishing four or five in the twenty-four hours, besides ale and brandy, two gallons of strong broth, and about two drachms and a half of laudanum. Laudanum and æther were also freely used as embrocations; and, in addition to this, he bathed altogether sixty-five times, the water being from 60° to 64° of Fahr., by which he was always relieved. His previous habits, in regard to the use of wine, are not mentioned; but it is stated, that he was in the vigour of life, of great bodily strength, and that, during the paroxysms, the sweat poured in torrents from his body.

M. *Carbonate of Iron.*—This has been much recommended by Dr. Elliotson.

"In two severe cases (33 and 34), after the bowels had been freely acted upon by turpentine, he gave the carbonate of iron, in doses of half an ounce, every two or three hours: both terminated favourably. In a third case, the disease was far advanced when the remedy was resorted to, and the patient died, within thirty hours afterwards, in a violent paroxysm. Another case, (17) treated with the carbonate of iron, at the Brighton Hospital, also ended fatally. In a fifth case, (21) in which it was tried by Dr. Dehane, of Wolverhampton, the symptoms were severe, and, in the first instance, bark, ammonia, and laudanum were resorted to; but, on the fourth day, no amendment having been produced, the carbonate of iron was given, to the extent of 1lb. daily, under which treatment the spasms gradually subsided. It was remarked, in this last case, that, on the fifth day after the iron had been used, the patient having voluntarily discontinued it, the spasms were increased, but they slowly subsided as soon as it was resumed, I am not acquainted with any other case in which this remedy has been tried." 197.

N. *Hydrocyanic Acid.*—This has been tried in a few cases, but with results not at all calculated to encourage us.

O. *Other Remedies.*—The colchicum autumnale, injection of opium and stramonium into the veins, inoculation with the ticunas, have been tried with a little dubious advantage.

In conclusion, Mr. Curling again insists on the necessity of discriminating between three forms of tetanus, which exhibit material practical differences—the pure acute tetanus—acute inflammatory tetanus—and chronic tetanus.

His principles of treatment in the first consist, in maintaining a free action of the bowels, in allaying the spasms with the tobacco, cold affusion or any other sedative equally effective, and in the due exhibition of tonics and stimulants.

For the second, antiphlogistic treament is necessary, combined with the means for allaying the spasms indicated in the first case.

For chronic tetanus he thinks the following remedies may be variously resorted to, according to the particular circumstances of the case. Purgatives, opium, antimony, vapour and warm water baths, the carbonate of iron, and other tonics, electricity. If the case be attended with febrile or inflammatory symptoms, proper means must be taken to remove them. In such instances the exhibition of opium, and other sedatives, may often be advantageously combined with antiphlogistic treatment; and it should be

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borne in mind, that although the spasms may be partly allayed by depletion, their complete removal does not depend upon the extent to which it is carried; and that the debility resulting from active depletion, is invariably prejudicial to ultimate recovery from tetanic irritation.

Appended to the volume is the table to which reference has been so often made. It is far too valuable to be omitted here, and will serve as a frequent source of reference to those who are anxious to become acquainted with the most authentic facts we possess respecting the disease. Long as is the table, we therefore extract it.

[*See Table on the following page.*]

A formal eulogy of this unpretending but very excellent book would be superfluous. The use that we have made of it, the space the present article occupies, assure our readers that we entertain a very high opinion of the industry and judgment of its author. Itself, for the most part an analysis, we could not analyse it. We have been compelled to extract rather than abridge, for who could much abridge summaries of facts?

The book should be in the library of every surgeon and physician. It is a valuable work of reference. It does not pretend to originality, for originality on such a subject was not wanted. But a compendium of facts *was* wanted, and such a compendium is this volume. We cannot part from Mr. Curling without thanking him for the information we have received in reading his work, and for the matter it has enabled us to offer to our readers.

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TABLE OF ONE HUNDRED AND TWENTY-EIGHT

Showing the Sex, Age, nature of the Injury, at what period after the Wound Tetanic Symptoms, the Remedies resorted to, and the

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No.	NAME.	Age.	NATURE OF THE INJURY.	Appearance of Symptoms.
I	——	10	Gun-shot wound of the calf of the right leg	5th day
II	T. Mountford	21	Forefinger of the right hand injured by a nail	3 weeks
III	——	30	Severe contusion of two of the fingers of the right hand	A fortnight
IV	Thomas Moss	22	Compound dislocation of the great toe of the right leg	10 days
V	Sand. Philipps	42	Right thigh wounded by an iron spike	9th day
VI	——	26	A blow on the head, and thrown into a canal	4th day
VII	——	19	Sole of the left foot injured by a nail	3 weeks
VIII	——	31	Compound dislocation of the astragalus and os naviculare	7th day
9	Thos. Purkiss	40	Contused knee	9th day
10	William Kidd	16	Laceration and contusion of the hand	13th day
11	Wm. Golden	16	A blow on the back of the neck	Follows day
12	J. Thompson	25	Lacerated wound of the little toe	10th day
13	W. Hayes	14	Sole of the foot wounded with an iron spike	11 days
14	H. S.		Forefinger wounded with a blunt piece of tin	12 hours
15	L.——	21	Wound in the sole of the foot with a nail, followed by an abscess	16th day
16	—— Cavazo	33	Foot slightly wounded with a nail	A month
17	Jas. Coppard	70	Contusion of right hand, with fracture of three of the metacarpal bones	10 days
18	Robert Gutter	21	Lacerated wound of the integuments of the leg closed with sutures	16th day
19	William Pile	15	Foot wounded with a rusty nail	11 hours
20	——	10	Fracture of both bones of the right leg, with extensive laceration of the integuments	9th day
21	Robert Ireland	43	Fractures of the left leg, crista of the ileum and great toe of right foot, with lacerations	10th day
22	James Greaves	mid. age	Foot wounded with a nail	14th day
23	Samuel Wood	20	Contused wound of the finger	A month
24	A. M'Farlan	23	Amputation at the shoulder joint, on account of a gun-shot wound of the arm	26th day
25	Frank, a Negro	22	Contusions about the head and body	
36	——, a Negro	25	Sole of the foot wounded with a rusty nail	3rd day
27	Sam. Joyce	35	Contused wound on the forehead.	24th day
28	Joseph Owen		Laceration of the great toe	3 weeks
29	J. Collins	30	Amputation of two fingers	11 days
30	W. Merrit	30	Amputation of the leg	13th day
31	W. Harris		Amputation at the shoulder joint	12th day
32	——	19	Slight wound of the left hand	18th day
33	Chas. Frasier	mid. age	Compound dislocation of the great toe	14th day
34	B. Macquire	44	Right thumb jammed between two pieces of wood	8 days
35	J. Flood	13	Feet torn by machinery	9th day
36	H. Southerby	14	A bite by a dog in the leg	A week
37	——	15	Both heels lacerated, and left humerus fractured	7th day
38	——	22	Sole of the foot wounded with a nail	5th day
39	John Ashford	40 to 50	A blow on the side of the head	4 weeks

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CASES OF TRAUMATIC TETANUS.

Symptoms were first evinced, the Results, and at what time after the Appearance of Sources from which the Cases have been obtained.

LES.

Result, and in what time after.	Treatment.	Authority.
Fatal, 16 hours ..	Purgatives. Opium. Tartar emetic bath	The Author.. *vide page* 31
Fatal, 4 days	Purgatives. Opiate injections	—— 88
Cured, 3 weeks ..	V.S. Opium. Calomel	—— 143
Fatal, a fortnight	Opiate injections. Stimulants	—— 158
Fatal, 3rd day	Opium. Tobacco	—— 169
Fatal, 9th day	Mercury. Opium. Tobacco	—— 170
Cured	Purgatives. Opiate injections. Stimulants....	—— 194
Fatal, 2nd day....	Hydrocyanic acid	—— 199
Fatal, 6th day	Purgatives. Opiate injections	——
Fatal, 15th day ..	Purgatives. Opium. Stimulants	——
Fatal, 2nd day....	C. C. Nuchæ. Croton oil. Opium. Belladonna	Medical Gazette, i. 645.
Fatal, a fortnight .	Purgatives. Mercury. Opium. Antimony. Musk. Turpentine. Belladonna.	—— i. 646.
Fatal, 2nd day ...	Cold affusion. Sulph of Quinine. Hydrocy. acid	—— ii. 343.
Cured, a few hours	Amputation. V.S. Tobacco. Opium	—— ii. 141.
Fatal, 10th day ..	V.S. Leeches. Opium. Musk. Mercurial friction.....	—— vi. 830.
Fatal, 18 days....	V.S. Leeches. Opium. Vapour-baths	—— vii. 312.
Fatal, 2nd day....	Blisters. Turpentine injections. Carbonate of iron.....	—— vii. 383.
Fatal, 7th day	Opium	—— vii. 828.
Cured, 3rd day ..	Division of the nerve. Opium. Camphor. V.S.	—— xi. 623.
Fatal, 2nd day....	Nerve divided. Croton oil. Opium. Antimony. Tobacco. Cautery	—— xii. 15.
Cured, a month ..	Bark. Opium. Carbonate of iron	—— xii. 799.
Cured, 6 weeks ..	V.S. Musk. Opium. Valerian.....	Medical Obs. & Inq. i. 51.
Cured, 6 weeks ..	V.S. Blister. Musk. Bark. Camphor. Valerian. Amputation.....	—— ii. 382.
Cured, a month ..	Musk. Opium	—— iii. 330.
Cured, a week....	Cold affusion	—— vi. 148.
Cured, 4 days	Cold affusion. Opium. Bark.....	—— vi. 155.
Cured, 5 weeks ...	Mercury. Colocynth. Gamboge. Scammony. Opium. Stimulants	Med.-chir Trans. ii. 284.
Fatal, 7th day....	V.S. Mercury. Dover's powders. Tobacco.	—— vi. 93.
Fatal, 2nd day....	Opiate injections.....	—— vii. 468.
Fatal, 8th day....	V.S. Warm-bath. Mercury	—— vii. 470.
Fatal, 2nd day....	Warm-bath. Opium.....	—— vii. 473.
Cured, 24 days ...	V.S. Warm-bath. Purg. Merc. Dover's powd.	—— xi. 384.
Cured, 10 days ...	Turpentine. Carb. of iron. Musk. Stimulants	—— xv. 163.
Cured, 25 days ...	Turpentine. Carbonate of iron	——
Cured, 6 weeks ...	Purgative. Turpen. injections. Leeches. Tobacco	Dublin Hospital Rep. iii. 357.
Cured, a month ..	Purgat. Mercury. Opium. Leeches. Tonics	Bright's Medical Rep. ii. 558.
Fatal, 40 hours ...	Musk. Purgatives. Opiate injections	—— 572.
Fatal, 4th day	Opium. Blisters. Antimony	—— 573.
Fatal, 4 weeks....	Purgatives. Tobacco. Turpentine.....	—— 579.

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No.	NAME.	Age.	NATURE OF THE INJURY.	Appearance of Symptoms
40	John Patrick .	12	A burn on the right thigh, penis, scrotum, and abdomen,	10th day ..
41	Rich. Burton	37	Foot wounded with a spike	3 weeks ...
42	——	17	Severe contusion of the left heel	Some days
43	——	44	A wound in the leg	15th day ..
44	—— Payne ...		Finger pierced by a splinter	10 days ...
45	James Sydling	40	Amputation of the leg	5th day ..
46	Wm. Godby..	5¼	Lacerated wound of the instep, and great toe fractured ..	8th day ..
47	Wm. Collins .	30	Laceration of the integuments over the gastrocnem. muscle	20 days....
48	——	50	Slight graze on the nose	
49	Smart, a Negro	18	Slight contusion of one of the toes	10 days.....
50	Luke, a Negro	12	Punctured wound of the thumb	Several days
51	——, a Negro .	22	Slight wound of the head	7th day ..
52	W.Gray, a Neg.	28	Thumb wounded with a splinter	9 days ...
53	——		Great toe punctured with a nail	2 weeks ..
54	Chas. Wattell	30	Right hand wounded by a pistol-ball	7th day ..
55	M. M'Gowan	22	Wound of the elbow-joint from a musket-shot	16th day ..
56	——, a Negro	20	Laceration and contusion of the left foot.....	15th day ..
57	Jas. Macrae ..	15	A severe lacerated wound of the left leg	10th day ..
58	Geo. Pybus ..	27	A wound on the left leg.....	A fortnight
59	Robt. Millar..	20	Two musket-shot wounds in the left arm	A month ..
60	John Brown..	25	A bite on the thigh	2nd day ..
61	Robert Tilling	8	A severe burn on the right hand	10th day ..
62	——, a Negro		Sole of the foot wounded with a rusty nail	13th day ..
63	Jos. Wishart..	20	Contusion of the abdomen.....	17 days...
64	Wm. Boyle ..	14	Laceration of the hand	12 days ...
65	Evan Wright	15	Severe compound fracture of the thumb.....	A fortnight
66	John Key....		Left arm wounded by a musket-ball.....	7th day ..
67	—— Gray	16	Arm shot away by a cannon-shot. Amputation at shoulder-joint five days afterwards	3 weeks ..
68	Elijah Dunn..	14	An extensive wound on the right leg, and a slight wound on the outer ankle of the left leg	10 days ...
69	——	16	A wound on the hip from a splinter.....	5th day...
70	W. Richey ..	30	Right arm shot away—amputation at the shoulder-joint	8th day ..
71	M. Wheelan..	18	Wounded on the shoulder and in several places on the back by splinters.....	8th day ..
72	—— Robinson	mid. age	Compound fracture of the hand by a grape shot.....	9th day ..
73	W. Meath ...	30	Leg shot away—amputation	9th day ..
74	J. Cairns		Wounded in the groin by a musket-shot.....	8th day ..
75	T. Kelly		A compound fracture of the leg	10th day ..
76	W. Connars..	29	A severe wound in the back by a splinter.....	11th day ..
77	Wm. Taylor..	25	Elbow-joint shattered by a ball.....	22nd day ..
78	Jas. Warring	20	Severe contusion of the thumb of the right hand	15th day ..
79	—— Landers..	23	Sole of the foot wounded with a rusty nail	8th day ..
80	J. Milwood ..		A wound upon the great toe from a hand-saw	10th day ..
81	Thos. Platt ..	46	Compound fracture of the thigh	3 weeks ..
82	J. Adams	44	Severe laceration of the hand and fingers.....	10th day ..
83	J. Murdoch ..	13	Punctured wound of the leg	9th day ..
84	J.C. Wright..	49	Punctured wound of the thumb	8th day ..
85	A. Brunetti..	58	An incised wound on the back of the hand	21st day ..
86	Lewis Fonzi..	50	Slight wound on the finger	
87	Fran. Mailhiot	50	Wounded with a nail in the sole of the left foot..... ..	10th day ..
88	John Johnson	20	An incised wound of the extremity of the finger.....	16th day ..
89	T. T. Mitchell	20	Wounded with a rusty nail in the sole of the foot	5th day ..
90	J. Kelly	14	Fracture of the radius, and laceration of the integuments of the right leg.....	16th day ..

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Result, and in what time after.	Treatment.	Authority.
Fatal, follows day	Opium. Musk	Swan, on Tetanus, 77.
Fatal, 6th day....	Turpentine. Opium. Mercury. Amputation	—— 82.
Fatal, 20 days....	.....	Morg. de Causis, &c. liv. 49
Cured, 3 weeks ...	Opium. Stimulants. Cold affusion	Currie's Med. Reports, i. 169
Cured, 8 weeks ...	Opium. Stimulants. Cold affusion	—— i. 172
Fatal, following day	V.S.....	Parry's Cases of Tetanus
Fatal, following day	Opium. Cold affusion. Antimony	——
Cured, 10 days ...	Opium. Mercury	——
Cured, 10 days ...	V.S. Purgatives. Opium	Lawr.'s Lec. Med-Gaz. v. 549
Fatal, 3rd day....	Purgatives. Tobacco.....	Edinb. Med.-chir. Tr. ii. 366
Cured, a month ..	Purgatives. Tobacco.....	—— ii.
Fatal, 8th day	Mercury. Opium	Jamaica Phys. Journal, 1834
Fatal, 5th day....	V.S. Tobacco	——
Fatal, 40 hours ..	Tobacco	——
Cured, a month ..	Opium. Cold-bath. Digitalis. Stimulants ..	Edin. Med. & Sur. Jour. vii. 14
Cured, a month ..	V.S. Opium. Amputation. Warm-bath. Mercury	—— viii. 412.
Cured, 6 weeks ..	Opium. Wath-bath. Tobacco. Stimulants..	—— xi. 198.
Cured, 3 weeks ..	Mercury. Opium. Stimulants. Tonics	—— xi. 306.
Cured, 6 weeks ..	Opium. Stimulants. Tonics	—— xi. 422.
Cured, a month ..	Opium. Stimulants	——
Cured, a fortnight	Purgatives. Opium. Mercury. Stimulants..	—— xiii. 451.
Cured, a month ..	Amputation.....	—— xvii. 394.
Fatal, 20 hours ..	Mercury. Opium. Camphor	—— xviii. 38.
Cured, a month ..	V.S. Opium. Blisters. Mercury.....	—— xviii. 191.
Fatal, 10 days....	Amputation. Opium. Mercury..... ..	—— xxi. 292.
Cured, a fortnight	Purgatives. Tobacco. Leeches. Mercury ...	—— xxiv. 277.
Fatal, following day	Opium. Mercury	—— xxx. 21.
Cured, a month ..	Purgatives. Opium. Mercury. Stimulants..	—— xxx. 28.
Fatal, 12th day ...	Opium. Stimulants. Cantharides. Cold affusion. Mercury	Med. & Phys. Jour. xiv. 129.
Fatal, 4th day....	Warm-bath. Mercury	—— xxi. 181.
Fatal, 2nd day....	Mercury	
Fatal, 4th day....	.....	—— xxi. 409.
Fatal, 3rd day....	Blisters. Mercury.....	—— xxi. 446.
Fatal	Mercury	——
Fatal, 4th day....	Blisters. Mercury..... ..	——
Fatal, 4th day....	Mercury. Amputation	—— xxii. 120.
Fatal, 5th day....	Mercury	——
Cured, 7th day ...	Amputation.....	——
Fatal, 2nd day....	V.S. Opium. Mercury. Warm-bath	—— xxii. 324.
Fatal, 5th day....	Mercury. Division of wounded parts.....	—— xxii. 185.
Cured, 8 weeks ..	Opium. Warm-bath. Stimulants. Mercury	—— xxii. 396.
Cured	Mercury. Opium	—— xxii. 479.
Fatal, 2nd day....	Mercury. Opium. Blisters	Med. Quar. Rev. iv.
Cured	Purg. Opium. Merc. Cold affus. V.S. Stimulants	Med. & Phys. Jour. xxxvii. 19.
Cured	V.S. Purgatives. Opium	xxxvii. 23.
Cured, 5 weeks ...	Opium. Warm-bath. Camphor. Hyoscyamus. V.S. Purgatives. Mercury	—— xliii. 192.
Cured, 6 weeks ..	Digitalis. Leeches. Antimony	—— xliii. 289.
Cured, 4 days....	V.S. Mercury. Purgatives. Warm-bath....	—— xlvi. 538.
Cured, 5 weeks ..	Opium. Purgatives. Blisters. Hyoscyamus	—— l. 446.
Fatal, 2nd day....	Purgatives. Hydrocyanic acid. V.S.....	—— lvi. 319.
Cured, a week....	Purgatives. Leeches. Carbonate of iron. Mercury. Opium. Antim. Cold affusion	—— lxii. 220.

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No.	NAME.	Age.	NATURE OF THE INJURY.	Appearance of Symptoms.
91	Daniel Power	40	Fracture of the leg, with slight laceration of the integuments	6th day ..
92	Patrick Vallily	15	Scalded on the leg, thighs, and arms, with hot water....	10th day ..
93	Wm. Fleming	17	....	7th day ..
94	Thomas Lee..	45	Compound fracture of three fingers	10th day ..
95	John Triggs..	25	Slight wound on the outer ankle of the right leg	7th day ..
96	Samuel Grigg	40	A lacerated wound above the left elbow, and a scratch on the nose.....	5th day ..
97	Pierre Genet .	30	A fall on the nose, causing excoriation and epistaxis	Five days..
98	—Moustapha	27	Compound fracture, with laceration of the fingers and hand, from a gun-shot	A month ..
99	M. Bonichon .		Gun-shot wound of the left foot	A fortnight
100	——	16	A blow on the cervical spine.....	3rd day ..
101	M. Leydet ...		A compound fracture of the leg.....	7th day ..
102	——	28	Last phalanx of auricular finger of left hand removed by a blow with a hatchet	2 hours ..
103	Edw. Wyer ..		Sole of the left foot wounded with a nail.....	11th day ..
104	Joseph Parks	15	Fracture of the bones of the thumb with laceration	6th day ..
105	Miles Bartley	60	A slight wound on the ear and temple.....	7 days ...
106	James Gaffney	42	Lacerated wound of the thumb.....	8 days ..
107	Mich. Farrell	24	A contusion and slight laceration on the right shin.....	3 weeks ..
108	——	22 mo.	Fracture of the tibia and tarsus with laceration	8th day ..
109	——	18	Two fingers amputated on account of gun-shot wound ..	10th day ..
110	——	38	Fracture of both bones of left leg.....	28rd day ..
111	——	48	Foot injured by a rusty nail	A week ...
112	——	40	Fracture of the little finger	9th day ..

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113	M. Breaklock	30	A cut on the thumb	4 days ...
114	Maria Urain..	28	Tendon of the peroneous longus exposed in an ulcer, pulled in dressing	An hour ..
115	—W.....	40	Lacerated wound on the palm of the left hand	11th day ..
116	A.B. a Negress	40	Cupping on the temples.....	5 days ...
117	Acouba, a Neg.	mid. age	Incised wound of the hand and fingers.....	13th day ..
118	——	50	A compound fracture of the leg	3 weeks ..
119	Elizabeth Fox	23	Lacerated wound of the ring finger of the right hand —last joint amputated	16th day ..
120	E. E.....	22	Sole of the left foot wounded with a thorn	3 weeks ..
121	Ann Alford ..	22	Toes frost-bitten...	
122	Mrs. Martin..	52	Wounded in the left cheek by an arrow	Follows day
123	Mary St.Gelais		Laceration of the integuments of the right knee	18 days....
124	Susan. a Neg.	24	Foot wounded with a bit of broken glass.....	8th day...
125	Mary A.Elliott	14	A lacerated wound of the wrist and palm of the hand....	14th day ..
126	——	37	Compound fracture of the right leg	18th day ..
127	Justine, a Neg.	18	Amputation of the thigh	10th day ..
128	—, a Negress	20	A cut on the metatarsus	10th day ..

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Result, and in what time after.	Treatment.	Authority.
Fatal, following day	Mercury. Opium	Med. & Phys. Journ. lxvi. 42.
Fatal, 6th day....	Purgatives. Opium. Mercury	Glasgow Med. Jour. ii.
Fatal, 3rd day....	Leeches. Mercury. Amputation. Antimony. Acetate of morphia	—— ii.
Fatal, 26 hours ..	Purgatives. Mercury. Opium. Blisters	Medico-chirurg. Rev. x. 614.
Cured, 6 weeks ...	Dover's powders. Purgatives. Tonics	Med. Transactions, iv. 29.
Fatal, 40 hours ...	.....	London Med. Repos. xiv. 1.
Fatal, 7th day....	Opium. Warm-baths. Cautery.....	Larrey, Mémoires de Chirurgie Militaire, i. 241.
Cured, a month ..	Opium. Warm-baths. Camphor. Musk....	—— i. 250.
Cured	Amputation. Opium	—— i. 265.
Fatal, same day ..	V.S. Purgatives	Daxille, Obs. sur le Tétanos.
Fatal, 3rd day....	....	——
Fatal, 12 hours ..	V.S. Warm-bath. Opium.....	Dict. des Sciences Médicales.
Fatal, 9th day....	Cold affusion. Tonics. Warm-bath. Electricity. Mercury	Med. Facts and Obs. vii. 267.
Fatal, 2nd day....	V.S. Purgatives. Opium. Cold affusion. Merc.	Transact. of the College of Physicians, Ireland, iv. 275.
Fatal, 6th day....	Purgatives. Tobacco. Opium.....	——
Fatal, 3rd day....	Tobacco. Mercury	——
Cured, a fortnight	V.S. Purgatives. Mercury. Antimony. Stimulants. Opium	——
Fatal, 2nd day....	.....	Travers on Const. Irrit. ii. 313
Fatal, 3 days	Purgatives. Belladonna	——
Fatal, 4th day....	.....	——
Fatal	Belladonna	——
Fatal, 48 hours ...	V.S.....	——

ALES.

Fatal, 19th day ..	Leeches. Opium. Antimony. Mercury. Zinc	Dr. Bright's Med. Rep. ii. 575
Cured, 2 days	V.S. Leeches. Warm-bath. Mercury. Morphia	Medical Gazette, ii. 384.
Cured, a fortnight	Opium. Mercury. Turpentine	—— vii. 428.
Cured	Purgatives. Tobacco.....	Edin. Med.-chir. Trans. i. 184.
Cured, 6 weeks ..	Purgatives. Tobacco.....	——
Cured, 5 weeks ...	Opium. Mercury	Med. chir. Transactions, ii.
Cured, a month ..	Blisters. Opium. Amputation	Medical Obs. and Inq. i. 1.
Cured	Blisters. Mercury. Opium. Cold affusion ..	Ed. Med. & Surg. Jour. i. 294.
Fatal, 2 days	Opium. Mercury	Parry's Cases of Tetanus, 10.
Cured, a month ..	Opium. Purgatives. Mercury. Antimony ..	Med. & Phys. Jour. xxiv. 40.
Cured, a month ..	V.S. Purgatives. Opium. Mercury.....	—— xlii. 95.
Fatal, 5 days	V.S. Mercury. Opium. Stimulants, Warm-bath	Dr. Morrison's Treat. on Tetan.
Cured, 2 months..	Purgatives. Opium. Tobacco	Travers on Const. Irrit. ii. 323
Fatal, 3rd day....	Opium. Æther	—— ii. 316
Cured, 3 months..	Purgatives. Tobacco. Opium	Campet, Tr. des Mal. graves, 18
Cured, 3 months..	V.S. Purgatives. Opium. Tobacco.....	—— 22

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AN ACCOUNT OF THE MOST FREQUENTED WATERING-PLACES ON THE CONTINENT, AND OF THE MEDICINAL APPLICATION OF THEIR MINERAL SPRINGS; with Tables of Analysis, and an Appendix of English Mineral Waters. By *Edwin Lee*, Esq. M.R.C.S. Author of "Observations on Continental Medical Institutions and Practice," "Treatise on Nervous Disorders," &c. 12mo, pp. 232. London, Longman and Co. 1836.

SINCE the Continent has been opened to the English, John Bull, Mrs. Bull, and all the little Bulls, have taken a wonderful liking to the various mineral waters so plentiful in France and Germany. That many of these waters, as well as those of our own country, have acquired celebrity from their own intrinsic merits, we do not doubt; but that their efficacy has been chiefly indebted to various well-known auxiliaries, is now universally acknowledged. Be this as it may, the watering-places of England and Continental Europe will be annually visited by shoals of our countrymen, and as there is scarcely a medical practitioner, of any standing, who is not, every year, consulted by patients respecting foreign medicinal waters, as well as domestic, it behoves him to acquire a general knowledge of their qualities, if he wishes to avoid the suspicion of ignorance.

The work before us is certainly the most compendious one of the kind which we now possess, especially as relates to Continental watering-places, with this advantage, that it is the most recent, and that the author has himself visited the places described, and observed the effects of the waters on the human constitution. If we were inclined to find fault, it would be with the brevity of the reports. The profession could surely afford to buy and consult a much larger volume than this on so important and extensive a subject. The Appendix, on English mineral waters, is still more open to the above objection of brevity—

> ——————— dum brevis esse laboro
> Obscurus fio.

Mr. Lee has classed mineral waters under six heads—sulphureous—chalybeate—saline thermal—saline aperient—alkaline—acidulous springs; to which he has added an Appendix on English mineral springs. The work is prefaced by a discourse on mineral waters in general, and on the greater attention which is paid to this part of hygiene and therapœia on the Continent than in England.

Under each class, the principal waters are indicated, with a short description of the localities in which they are situated—the accommodations for patients—and the diseases to which the waters are applicable. We shall give a sketch of the most celebrated and most frequented.

1. *Sulphureous Springs.* Amongst the most powerful waters of this class, are AIX-LA-CHAPELLE—Baden (near Vienna)—Harrowgate—and the Pyrennees. Used in the form of bath, their primary operation is on the skin—their secondary, on the mucous membranes and viscera. Taken internally, they act on the bowels, the air-passages, and the urinary organs. In cuta-

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neous and rheumatic affections, they are often very efficacious. The springs of Aix are of very high antiquity. The place itself is very pleasant. One of the springs is at a temperature of 130° Fahr. containing a large quantity of sulphur. There are also some chalybeate waters here.

"A course of these waters is serviceable in most cases where the object is to act gradually, though powerfully, upon the skin, mucous membranes, abdominal viscera, nervous and absorbent systems; as in obstinate rheumatic or gouty affections, with calcareous concretions in the joints; contraction or loss of power of the limbs; paralytic cases, when not dependent upon cerebral disease; intestinal and hepatic inactivity; piles; hypochondriasis; disordered health from residence in unhealthy climes, abuse of mercury, or other causes; some cases of neuralgia, when not attended with great irritability of the system; asthma and chronic bronchitis, with increased secretion, especially in old persons; some chronic diseases of the skin, as scabies, impetigo, psoriasis, lepra, and prurigo; enlargement of the lymphatic glands; vesical catarrh, with tendency to the formation of stone; leucorrhœa, and other mucous discharges of long duration. Dr. Alertz is one of the most esteemed among the resident physicians." 40.

These waters contain sulphur, muriate of soda, sulphate of soda, carbonate of soda, phosphate of soda, and a few other ingredients—in atomic doses—31 grains of solid matter in the pint.

Baden

Is a clean little town near Vienna, at the foot of the Styrian Mountains. Gaming is wisely prohibited by Government. The springs are hot—some of them considerably so—and are rather strongly saline and sulphureous. They resemble those of Aix-la-Chapelle, but are rather weaker. The waters are more used for bathing than for drinking.

Aix—(in Savoy).

These waters, near Chambery, are of high antiquity, and situated in a beautiful country. The sulphur spring, and the so-called alum spring, are much frequented. The diseases for which they are prescribed, are those to which sulphureous springs are applicable.

Sulphureous Springs of the Pyrennees.

The Valley of the French Pyrennees presents a greater abundance, in the same space, of mineral springs, than any other place in the world. They also present more *agrémens* for a Summer residence than most other localities—"more resources for bodily and mental recreation." The accommodations are excellent, and living is not expensive. The scenery is various and beautiful.

Bareges.

This village, consisting of only 80 houses, is situated on the verge of a mountain torrent, in a cheerless spot, enclosed by steep, pine-covered, and snow-tipped mountains. It is crowded during the season with persons of all ranks, and offers better accommodations than might be expected. There are six springs, slightly sulphureous in taste.

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"The water is perfectly clear, and does not taste strongly of sulphur; but the smell is very decided. It is mineralised principally by the sulphuret of sodium; but also contains carbonate of soda, a small quantity of sulphate and muriate of soda, azote, sulphuretted hydrogen, and glairine or animal matter. Taken internally, it often produces, like other sulphurous waters, a degree of excitation, marked by acceleration of the pulse, perspiration more or less abundant, increased appetite, and sometimes sleeplessness. It is not in general purgative, and even sometimes induces constipation, particularly when exclusively used for bathing; but is diuretic, diaphoretic, and expectorant. By its local or general stimulating properties, it cleanses foul ulcers, lessens the induration of callous and fistulous sores, promotes the exfoliation of carious portions of bone, and cicatrization, frequently causing foreign bodies which had long been imbedded in the deeper textures to advance towards the surface. It is also highly efficacious in allaying long-existing pains, whether of a rheumatic nature or arising from wounds; in remedying the stiffness and immobility of joints when these symptoms depend upon tumefaction of the soft parts; in hemorrhoidal affections, jaundice, and chronic disorders of the chylopoietic viscera, especially long-standing dysentery; in chronic syphilitic diseases, and those resulting from the abuse of mercury; in strumous swellings, dry asthma, and chronic bronchitis, when not attended by much secretion. In cases of humid asthma, the water at Cauterets generally agrees better than that of Baréges." 54.

BAGNIERES DE LUCTION

Is a watering-place of very agreeable locality, and much frequented. Some of the waters are 58° or 59° of Reaumur, which is rather high. They contain hydro-sulphuret of sodium—carbonate of soda—some muriate and sulphate of soda, and silex. The waters are used internally and externally. They often occasion constipation of bowels, and require aperients. In rheumatic and cutaneous affections—in psoriasis and eczema—these waters are said to be more powerful than those of *Baréges*.

2. *Chalybeates.* The most celebrated of these is PYRMONT, eight German miles from Hanover, situated in a delightful valley, and containing 2000 inhabitants. The accommodations are good, and the amusements numerous. Pyrmont possesses three different kinds of springs—chalybeate—saline—and acidulous. The chalybeate, however, is that which has immortalized Pyrmont. From this spring, upwards of one hundred thousand flasks are annually exported.

"The water is exceedingly rich in iron and carbonic acid gas, is limpid, very sparkling, of an agreeably acid and somewhat astringent taste, and on standing, deposits a brownish sediment, composed of oxide of iron and manganese; its temperature is 10° R. A few glasses taken in quick succession occasion a sort of temporary intoxication, with a feeling of satisfaction and hilarity. When a certain quantity is drunk it has an aperient effect, and promotes the excretion of urine. It is better supported than most waters of this class; and when it can be procured, merits a decided preference over others, especially in cases of general debility remaining after loss of blood, copious discharges, parturition, or severe illness; in chlorosis, hypochondriasis, hysterical and other nervous affections; diseases of the digestive and urinary apparatus, depending on general or local debility; passive uterine and hemorrhoidal hemorrhage; suppressed or difficult menstruation; leucorrhœa, and sterility from weakness, especially where the generative organs had not acquired their full development previous to marriage." 84.

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Spa,

Which is second only to Pyrmont, is now comparatively deserted. It is out of favour with the English, and also with the Dutch.

Langen-Swalbach

Has been so celebrated by Captain Head, in his Brunnens, that we need scarcely notice it here.

Kissengen.

This watering-place, situated in Bavaria, is coming into great note. It has been frequented, indeed, for 300 years past. Upwards of a thousand annual visitors have been there of late years. Two of the springs are chalybeate—the third acidulous. The water is exported in large quantities. It is of a yellowish colour, and ferruginous saline taste. The astringent quality of the chalybeate is, in a great measure, neutralized by the salts which it contains.

"The action of these springs upon the mucous membranes, the absorbent and nervous systems, renders them peculiarly applicable to cases where it is desirable to produce a tonic, but not astringent effect, as in diseases of the chylopoietic viscera dependent upon want of tone; hypochondriasis and hemorrhoids, with tendency to constipation; chronic affections of the mucous membrane of the air-passages, or of the urinary organs, when without inflammatory complication; leucorrhœa, and irregular menstruation arising from general or local debility; scrofulous cases; many nervous complaints, and other cases to which the exhibition of tonics is suited. The baths are said to be very efficacious in cases of atonic gout and rheumatism." 95.

Marienbad

Is another of the lions of Germany, lying about five German miles from Carlsbad, in a valley surrounded by high mountains. It possesses two kinds of mineral springs—one saline alkaline—the other alkaline chalybeate. The latter is much used, where chalybeates are proper. It is rich in carbonic acid, and the iron is intimately combined with it. It is, therefore, easily borne. It is exciting and strengthening.

Saline Thermal Springs.

Wisbaden is amongst the foremost of these. It is but an hour's drive from Mayence, lying in a valley encircled by low hills. Sunday is the grand gala day, though the population is Protestant, and then the shops, the theatres, ball-rooms, &c. are thronged with visitors from Mayence, Frankfort, &c. The springs of Wisbaden were used by the Romans, and lately they have been much frequented by the English.

"The Kochbrunnen, or boiling spring, is the most generally used; it rises in the town, and is the central point where a crowd of persons of various nations assemble at stated hours to sip their glasses of water, while sauntering about under the acacia avenues, and listening to the musical band. The water is perfectly limpid when taken into a glass; its taste is rather agreeable than otherwise, and has been compared to that of weak broth oversalted; its temperature

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is 151° Fahrenheit. The carbonic acid gas is seen bubbling up to the surface of the water; the quantity contained in a pint amounts, according to Ritter, to 6¼ cubic inches. This spring holds in solution a greater quantity of saline substance than any other of the same class; those of Pyrmont and Borcette, perhaps, excepted."

"Used in the form of bath, the water is generally exciting; it stimulates powerfully the skin and absorbent system, not unfrequently producing an eruption on the surface, whence the excitement is transmitted to internal parts, especially the abdominal viscera, increasing the activity of their functions, though in many cases no perceptible change is experienced at the time. Internally taken it promotes digestion, sometimes producing an aperient effect; frequently increases the secretion of the kidneys, and acts consecutively upon the skin. Most invalids combine the internal with the external use of the water.

A course of this water is specially applicable to cases of articular rheumatism, with swellings of the joints of long duration; chronic gout, particularly when accompanied with calcareous deposits; disorder of the digestive powers, with vitiated secretion; strumous enlargement of the glands, or disease of bones; derangement of the general health in persons who have long resided in tropical climates, as well as that caused by intemperance, or the abuse of mercury, when not attended by exceeding debility; some cases of neuralgia and tic; amenorrhœa and dysmenorrhœa, if unaccompanied with a high degree of local irritation; paralytic affections, especially if caused by morbid impressions upon the organic nervous system, and not depending upon cerebral disease; and some chronic diseases of the skin. It is also said to be efficacious in bronchial complaints and asthma with copious expectoration; in these cases the inhalation of the vapour is joined to the employment of the water. Douches, local and general vapour-baths, are used in many cases of local disease, as is also occasionally the muddy sediment deposited from the water.

Solid Substance yielded by a Pint of Water from the Kochbrunnen, analysed by Kastner.

	Grains.
Muriate of Soda	44·225
Sulphate of Soda	0·700
Muriate of Lime	5·480
Sulphate of Lime	0·420
Carbonate of Lime	1·650
Muriate of Magnesia	0·790
Carbonate of Magnesia	0·700
Extractive Matter	1·750
Iron	0·078
Muriate of Potass	1·200
Fluate of Magnesia	1·600
	57·593."

BADEN-BADEN.

These waters are very nearly the same as those of Wisbaden. The situation is very beautiful, and excellent hotels and table-d'hôtes render this fashionable watering-place one of great resort by all nations. We were sorry to see gaming carried on there to a shameful and ruinous extent.

VICHY.

We must now conclude our notice of Mr. Lee's book, with some account

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of this now celebrated mineral spring. It is situated in an extensive valley, 87 leagues from Paris, with excellent accommodations. The springs were used by the Romans, and many antiquities are still discovered there. The temperature of the different springs varies from 18 to 34 of Reaumur.

"The water of Vichy is limpid, without smell, of an acidulous alkaline taste, not unlike that of soda water. It contains a large proportion of free carbonic acid, which is most abundant in the Fountain des Acacias (twenty-three cubic inches to the pint). Next to this spring, Lucas, Les Célestins, and Le Grand Bassin, are the richest in this respect. Carbonate of soda, and carbonic acid gas are the predominating ingredients of Vichy water: this salt is extremely plentiful in the Célestins, which contains ninety-six grains to the pint; the Lucas likewise contains a large quantity. Iron is also found in these springs; the Acacias contains half a grain to the pint, and might be ranked among the chalybeate springs, were it less rich in saline substance.

The operation of these waters is alterative, laxative, and diuretic, without being aperient or diaphoretic: it affects most perceptibly the secretion of urine, increasing its quantity, and altering its quality, so as, according to M. D'Arcel, to render alkaline the urine of a person after having drank three or four glasses, or taken a bath: hence it is highly useful in some diseases of the urinary organs especially stone, and the disposition to the formation of lithic acid, or what is commonly called red gravel. The water is also much used, both at the springs and throughout France, in those deranged states of the digestive functions which are termed abdominal engorgement or obstruction; in chronic enlargement of the liver or spleen; long standing stomach disorder, with acidity; hemorrhoidal affections; and uterine derangement. It has but little effect on scrofula, most diseases of the skin, and rheumatism, and often aggravates gout. Its use should be prohibited to plethoric, or highly irritable persons, to those of rigid fibre, in nervous diseases and affections of the chest." 185.

We have now given sufficient specimens of Mr. Lee's book to enable our readers to judge for themselves. It is certainly a useful compendium, both for the home practitioner and the wandering invalid.

Facts and Cases in Obstetric Medicine, with Observations on some of the most important Diseases incidental to Females. By *J. T. Ingleby*, Member of the Royal College of Surgeons in London, Senior Surgeon to the General Dispensary; Surgeon to the Magdalen Asylum; and Lecturer on Midwifery at the Royal School of Medicine, Birmingham. Octavo, pp. 296. London. Longman and Co.

Whether we view its splendid museum, the largest out of the metropolis, and chiefly collated by its illustrious founder, Mr. Sands Cox—the number and proficiency of its students, amounting to nearly one hundred—the zeal and talents of its teachers—and the extent and variety of its instructions, which have recently included the study of mathematics; the school of medicine at Birmingham has acquired a celebrity, not inferior to that of any similar institution. While the elements of professional knowledge are thus

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placed within the reach of every disciple, it is a subject of serious regret that the wards of one of the largest and best conducted hospitals in the provinces are open only to a limited portion of the students thirsting for practical information, and lamenting the absence of clinical tuition. The number of beds contained in this establishment, which exceeds that of some of the recognized hospitals in London, and the high repute which its medical and surgical officers have acquired, are surely sufficient to satisfy the *purest* and most fastidious practitioners that the principles and practice of medicine and surgery may be as scientifically and successfully taught within its walls as at any college in the kingdom. We are aware that these sentiments differ from the opinions of the distinguished surgeons of this excellent charity, expressed some time ago. Nevertheless, from our own knowledge of their experience and operative skill, we are convinced that the students at Birmingham would gladly avail themselves of access to the hospital under reasonable restrictions, and as fully appreciate the liberality, which may afford them clinical information, as they already do the free admission to the operating theatre, which we must do the surgeons the justice to say they have generously permitted them to enjoy. Were this valuable institution rendered subservient to the dissemination of science as well as philanthropy and its portals thrown open to the profession, not only would the younger members reap a luxuriant harvest, but the medical and surgical officers might render important services to society by arranging and communicating the rich stores of information which such an establishment cannot fail to afford them. To the march of time however, which, as Lord Bacon observed, is the great reformer, we must leave this matter, and proceed to the immediate object before us.

Mr. Ingleby's *labours* in obstetric science have already been sufficiently *prolific* to justify us in considering him zealous and diligent in his legitimate department. His work on uterine hæmorrhage, noticed by us in the 33d number of the new series of our Review, has already gone through one edition, and we believe the industrious author is revising his useful performance for re-publication. The favourable opinion we gave of that, his first effort, has been confirmed by the sale of every copy of his book.

The present work is divided into seven sections:—1. "*On Puerperal Convulsions*; 2. *On Malposition of the Uterus, Ovaria, Bladder, and Urethra, both in the impregnated and unimpregnated state, in connection* (connexion) *with Retention of Urine*; 3. *On Obstructions in the soft parts to the Progress of Labour*; 4. *On the Induction of Premature Labour in Cases of Organic Disease*; 5. *On Laceration of the Uterus and Vagina*; 6. *On Inversion of the Uterus*; 7. *On the Signs and Symptoms of Pregnancy, their obscure and deceptive Characters, their Complication with Disease, and the Signs which denote the Extinction of Life in the Fœtus; with an Appendix to Section* 6."

As the first three and a portion of the sixth and seventh sections are already in the hands of the profession, we shall briefly notice their contents, and pass on to the more original portions of the work.

1. After alluding to the different forms of puerperal convulsions, the author observes, by way of distinction from hysteria, that the latter is accompanied

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"Neither with stertor or (nor) coma, and rarely, if ever, by convulsion of the muscles of the face." P. 3.

Our own experience corresponds with that of Sydenham, who says—

"This disease is not more remarkable for its frequency than for the numerous forms under which it appears, resembling most of the distempers wherewith mankind are afflicted.—*Swan's Translation*, 1749, *p.* 370.

Dr. Conolly, in his article on Hysteria, in the Dictionary of Practical Medicine, remarks, that the fit consists sometimes of a temporary palsy of some of the voluntary muscles, and—

"Sometimes of all the voluntary muscles of the body, and the patient falls into a state of coma; is insensible, &c."

"These cases somewhat resemble apoplexy, and cases are on record in which they have gone on to it."—*Vol.* 2, *p.* 560.

Our object for noticing this Proteiform character of hysteria is to warn our junior readers from relying too implicitly, in forming their diagnosis, on isolated symptoms; as all experienced practitioners must admit that the line, which separates this disease from others, which it resembles, is too delicate for superficial observation.

With respect to the causes of puerperal convulsions, the author states that they may be referred to—

"Either an excited or turgid state of the vessels of the brain (often promoted by improper diet and a neglected state of the bowels during gestation) or by (to) loss of blood, as after a dangerous hæmorrhage. There is also a third state subordinate to those just mentioned, and which seems more immediately dependent upon excessive sensibility of the uterine fibres, since it generally happens under an irregular and highly painful action of the uterus during its dilatation." 9.

The anasarcous swellings are properly considered by Mr. Ingleby as concomitants, and owing to one common cause, namely, an embarrassed circulation.

After detailing the various symptoms of convulsions the author observes—

"I am acquainted with several cases of puerperal convulsions, which were succeeded by puerperal mania: the transition may probably be the result of the large bleedings, which were necessary to subdue the primary disease." 17.

We should be inclined to attribute the madness in these instances to an inflammatory state of the vessels of the brain or its investing membranes: the large bleedings having removed the congestion in the cerebral circulation, and unfolded the mental derangement.

From the pathology and prognosis of puerperal convulsions we pass on to the treatment of the disease. In the sthenic species there are two indications to be attended to; the first to allay vascular turgescence and excitement; the second to diminish the size of the uterus by the evacuation of a part or the whole of its contents. The author is an advocate for early and active depletion, and in a plethoric condition of the system there can be no doubt of its propriety and great importance. Venesection at the arm or arteriotomy at the temple may be employed according to circumstances. After the fit has subsided, we must lose no time in the use of active purga-

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tives. On this subject much useful information is given, for which and for other minutiæ in the treatment we must refer to the work itself.

Before the seventh month of pregnancy, the artificial evacuation of the uterus is improper under any circumstances. The membranes may be ruptured, and the liquor amnii discharged at a much earlier period. It is however questionable whether after the seventh month this operation should be performed, unless the state of the os uteri should render immediate delivery by turning readily practicable: as such a contraction of the uterus may succeed, as might render the subsequent introduction of the hand difficult or dangerous; or the uterine action, on which the ultimate benefit of the proceeding may depend, may not supervene at a seasonable period. Hence, as our author observes, convulsions preceding labour are highly dangerous and, according to Dr. Hall,

"In every case which terminated unfavourably, there was no dilatation of the os uteri, and consequently no labour." 32.

When convulsions occur after labour has commenced, and they appear to be of an hysterical nature, when the patient is sensible between the fits, and the pains are regular, the author remarks that the case may be left to Nature. On the contrary, when the disease is urgent, and the os uteri in a soft and yielding state, artificial delivery should be immediately accomplished. On the practice of dividing the rigid and undeveloped cervix uteri, adopted by Dubois, Mr. Ingleby makes some sensible remarks, and concludes by recommending the treatment adopted by Dr. Joseph Clarke in such cases, viz. to trust to the efforts of Nature, assisted by medical means, unless the life of the patient is endangered, and then to promote delivery in the speediest and safest manner.

"Convulsions," the author states, "arising about the second day after delivery, are usually connected with the secretion of milk, and demand active depletion; but subsequently to this period the attack will probably be connected with irritative fever, the result of decomposed portions of disrupted placenta, of which I have seen several instances.

Phegmatia dolens is a frequent sequel of this species of convulsion." 41.

In referring this irritative fever and phlegmatia dolens exclusively to decomposed portions of disrupted placenta, without the intervention of any secondary cause, we beg leave to differ from the author; as our experience and that of others have proved of late that these diseases are the result of inflammation and purulent deposit in the veins of the uterus, or the neighbouring venous tubes; in short, they constitute what is called uterine phlebitis, and may often be successfully combated by leeches applied to the vicinity of the inflammation, and by an early and judicious use of calomel and opium. In such cases, as the author justly states, the depleting system is rarely admissible. His directions for the management of patients, labouring under this variety of irritative or typhoid fever, are full and peculiarly applicable.

Those puerperal convulsions resulting from hæmorrhage are most successfully treated by opium. Here secale cornutum, ammonia, aromatic confection, and other stimulants and cordials, have been found by the author appropriate remedies. Various collateral means are mentioned; and the

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Essay concludes with numerous cases, which our limits will only allow us to recommend for perusal.

2. In speaking of retroversion of the uterus, Mr. Ingleby advocates the opinion of Dr. Merriman, that this organ may undergo a partial retroversion during the whole period of pregnancy; and he also extols the frequent use of the catheter, recommended by the latter in these cases. In obstinate retroversions, the author advises an attempt to be made to replace the dislocated organ, and details the usual plan of proceeding. The absolute necessity for this manual interference must be very rare, except where the pelvis is distorted, as we have never had occasion to adopt it, although engaged in an extensive private and consulting practice. In one instance, the catheter was introduced regularly from the third to the fifth month, when the ascent of the uterus gradually and completely followed. The use of this instrument has been found in some cases impossible, and the patients have died from ruptured bladder.

A peculiar form of incomplete retroversion sometimes occurs, in which the os uteri rests above the symphysis pubis. The bladder in this case is liable to undergo enormous distention. Dr. Weir of Glasgow succeeded in a case of his kind in restoring the natural position of the displaced organ, by pushing upwards the fundus, and pulling downwards the os uteri.

A distorted direction of the urethra will occasion difficulty to the surgeon, and require a corresponding curve in the catheter.

When the disease is occasioned by morbid enlargement of the body or fundus of the uterus, this organ must not be permitted to continue in a state of retroversion.

Complicated retroversions and flexions of the uterus next engage the author's attention; and after making some useful remarks on malposition of the bladder, illustrated by two interesting cases, he terminates this part of the volume with some practical observations on malposition of the urethra.

3. Tumors in the labia pudendi, occasioned by extravasation of blood within the cellular membrane, and obstructing the progress of labours, may be safely relieved by punctures, effected by means of a very fine curved needle.

Contractions of the vaginal orifice and canal, impeding the process of parturition, will generally give way to the natural efforts. When incisions are required, the author agrees with Dr. Rigby in recommending them to be made towards the termination of labour, and during one of the pains.

After the incised parts have been healed, it will in such cases be needful to prevent a recurrence of the contraction by the regular employment of bougies.

The fluctuating ovarian tumors, impeding labours, may be punctured, when situated in the recto-vaginal septum. Tumors, not admitting relief by this proceeding, may be extirpated, or require the use of the perforator. An ovarian cyst may present in other situations. It has been said to be found at the anterior part of the pelvis, and in a lady, who had been under the care of two eminent lecturers on midwifery in London, and afterwards consulted Mr. J. M. Coley of Bridgnorth, a tumor of this description was discovered by him presenting at the side of the pelvis.

Fibrous tumors in the fundus of the uterus present no impediment

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parturition, and may co-exist with pregnancy, when not obstructing the opening in the fallopian tube. When they extend towards the cervix uteri, they present insuperable obstacles to delivery by the natural process. As many of these uterine tumors are found to contain a fluid, the author recommends the operation of puncturing, and submits for consideration the propriety of introducing a needle or fine trochar.

After treating of polypus in utero, and the excision of tumors from the vagina and uterus, the author terminates his remarks with an important case, in which a fibrous tumor was successfully removed, communicated by one of his pupils.

4. In the section on the induction of premature labour in cases of organic disease, the author alludes to the novel application of this measure by Dr. Ashwell, published in Guy's Hospital Reports. One of the diseases, for which this operation is recommended, is the fleshy or fibrous tubercle.

This fibrous tumor is met with of various size, from that of a pea to that of a cricket-ball, or still larger. Its shape is generally globular, and its structure semi-cartilaginous, disposed in a radiated form. Occasionally it is granular in its appearance, and resembles a mass of minute tumors, having separate envelopes. In the firmest tumors the interior is sometimes found in a soft or liquid state. In other instances, as the disease advances, its density increases, until it acquires the consistency and character of cartilage without any vessels containing red blood. Calcareous depositions are occasionally observed in the morbid structure, which by degrees acquire all the properties of carbonate and phospate of lime, varying in consistence from that of pumice-stone to that of marble.

"The presence of the fleshy tubercle in the unimpregnated uterus is rarely attended with immediate danger to life. The distress will be either of a neuralgic or subacute kind. It is the combination of pregnancy with this disease of the uterus, which so materially affects the welfare of the patient." "The tumours (according to Dr. Ashwell) soften during the latter months, the increased vascular supply leads to increased inflammation, unhealthy and imperfect suppuration is established in them, and death occurs soon after parturition." "With the view of preventing or removing inflammation, and averting the pressure and contusion, which the gravid uterus is supposed to make upon the diseased growth, Dr. Ashwell strongly recommends the induction of premature labour." 157.

The author doubts the existence of this disorganization so frequently as believed by Dr. Ashwell, and adduces two cases in support of his assertion. He appears to be of opinion too, that death following parturition is attributable to peritoneal inflammation, as was found to be the case in these instances, and as may be inferred from the following passage.

"When fibrous tumours exist in the gravid uterus, the structure surrounding them is more vascular than when they exist in that organ in the unimpregnated state. It would thus appear that the tumours will be more predisposed to put on inflammatory action in the former than in the latter state of the uterus. Granting then that the tumour becomes inflamed during gestation, is it warrantable to have recourse to an operation so responsible as the one in question? In all acute diseases is not the danger known to be greatly increased during a state of pregnancy, the premature expulsion of the ovum being a common result of the prevailing excitement? The propriety of bringing on labour, whilst a

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tumour is in a state of active inflammation, may very justly be questioned; for the contraction of the uterus, necessary to accomplish the separation of the membranes, and the expulsion of the fœtus, would most probably increase the irritation in the tumour, and thus exasperate the inflammation." 158.

Now it does not appear to us that inflammation is more likely to be brought on by the uterine action consequent on a careful evacuation of the liquor amnii, than by that attendant on labour at the full period of utero-gestation, which has spontaneously supervened. Inflammation is not, however, the only consequence to be dreaded in these cases from labour artificially or naturally excited: as hæmorrhage arising from an inability in the uterus to contract, is an affair of equal, if not far greater importance. From this cause alone death has been found to take place in a short time after the birth of the child, as was witnessed by Chaussier, and adverted to by Dr. Lee in a paper on fibro-calcareous tumors, published in the 19th Vol. of the Transactions of the Royal Medical and Chirurgical Society. The favourable termination of the two first cases suggesting to Dr. Ashwell the proceeding he recommends, in which premature labour was unintentionally induced by the requisite mode of examination, appears to us to justify the attempt. When, therefore, the co-existence of a fibrous tumor and pregnancy can be satisfactorily ascertained, and the situation of the disease is favourable for the process, we are of opinion that the premature rupture of the membranes might be followed by the happiest results; and, should the bulk and situation of the tumor totally preclude the expulsion of a living fœtus at the seventh month, that the operation may be performed at the fourth or fifth, by the introduction of a small male silver-catheter, at which early period, should contraction of the uterine parietes be found impossible, a fatal hæmorrhage would not be so likely to occur as at a more advanced stage of gestation; and it may be restrained by the application of the plug, which the author, in his work on uterine hæmorrhage, has so much and so justly extolled. The pain and distress resulting from the unalterable confinement of the morbid uterus within the pelvis, might be another motive for the adoption of the modification we have proposed of the treatment recommended by Dr. Ashwell. At the same time we concur with Mr. Ingleby in reprobating the indiscriminate adoption of the practice, as in the hands of inexperienced practitioners it might bring an useful operation into unmerited disrepute.

Nature sometimes in these cases effects that, which by art we have been in vain endeavouring to accomplish. A diminution, often sudden, begins in the tumefied mass, which may subside within the natural boundaries of the uterus. Of this fact the author seems to be fully aware, and in doubtful cases we think it should be taken into consideration as a possible event. We are not aware, however, that such a result has hitherto been noticed in the impregnated uterus.

The pain attending the development of fibrous tumors is various, probably depending in some measure on the direction they may take. Originating in the fibrous structure of the uterus, they sometimes extend to its serous and sometimes its mucous coat. In the former case the symptoms of acute or chronic peritonitis will present themselves, in the latter increased discharge with or without blood will attend, and the tumor, delivered into the vagina through the gradually dilated orifice of the uterus, may assume

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the character of polypus, and be safely removed by operation. When acute inflammation from any case attacks the peritoneal coat of the uterus, adhesions between its free surface and that of the abdominal peritoneum and the omentum are apt to follow, and to simulate by their density and induration fibrous and malignant tumors. An instance of this kind was observed in a case of hydrometra, recorded by Mr. J. M. Coley, of Bridgnorth, in the 4th Vol. of the Transactions of the Provincial Medical and Surgical Association.

With respect to ovarian tumors, the author remarks that those containing fluid may be diminished by puncture; while those of a malignant nature could only be prolonged with accompanying misery by the artificial evacuation of the uterus. In proof of the failure of this operation an instance is brought forward, in which the induction of premature labour at the fifth month was followed by death the next day. It does not appear however that the fatal result was altogether, if at all, attributable to this cause; as the life of the patient had been previously placed in imminent danger by an accident, and the operation was adopted as a last resource for the relief of an alarming peritonitis, accompanying a malignant ovarian tumor.

For the relief of ascites connected with pregnancy, every judicious practitioner must coincide with the author in preferring abdominal paracentesis to the artificial discharge of the uterine contents.

On the whole, this short Essay is highly creditable to the sound discretion and humanity of the author, and his conscientious feelings on so grave a subject cannot be more forcibly illustrated than by his own words in the concluding paragraph.

"Under any circumstances, it will be most important to consider whether the disease is likely to prove fatal; for in sanctioning the operation we must not only believe that such a result will happen, if gestation is suffered to continue, but ought to entertain a strong conviction that the evacuation of the uterus is essential to the removal or the marked mitigation of the disease. As a matter of conscience, the concurrent testimony of several eminent midwifery practitioners in its justification should previously be obtained." 172.

5. Laceration of the uterus, according to the experience of some of the most distinguished practitioners in midwifery, as Hunter, Denman, Ramsbotham, &c., was considered uniformly and necessarily fatal. As however several successful cases have of late been recorded by professional gentlemen of unquestionable veracity, we ought never to despair of recovery, until life has actually become extinct.

It has been long since ascertained that those most liable to this accident are women who have given birth to several children, and an attempt has been made to explain this circumstance, by supposing that after repeated pregnancies the parietes of the uterus become attenuated, especially in cases of distorted pelvis. This appears to be the opinion of Dr. John Ramsbotham from the following passage;

"I am thence led to suspect, either that the uterus has received some local mechanical injury from the violence of its own efforts or from the previous effects of artificial assistance, by which its structure is, at this point weakened; or, that it is *thinned at the part where it gives way during the last months of gestation, by continued pressure against some prominent part of the pelvis.*"—*Practical Observations on Midwifery.* Part 1, page 383.

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It is the opinion of Mr. Ingleby that this misfortune is more likely to arise from the projection of the sacrum observable in a distorted pelvis during pregnancy, than from this supposed attenuation of the uterus.

"In the disease termed *malacostion*, the sacral promontory undergoes a sensible change in its figure, *antecedent* to any apparent softening of the pelvic bones in general, and the reason is obvious. This yielding, which is at first very slight and is arrested after delivery, returns with a recurrence of pregnancy; rendering each act of parturition more difficult."

Thus we understand why lacerations occur more frequently in women who have borne children, than in primiparæ; and the explanation is far more consistent with the principles of physiology, than to ascribe the injury to attenuation of the uterine tissues. "In confirmation of this," says Mr. I., "I have the satisfaction of adducing the experience of my valued and intelligent friend, Mr. J. M. Coley of Bridgnorth. In his description of two cases, which he very kindly sent me, I find the following observation;"—

"'In both cases, the parietes of the uterus were unusually thick, a circumstance which leads me to doubt the truth of the opinion entertained by accoucheurs of the first rank, that this accident *generally* arises from an attenuation of the womb, occasioned by repeated pregnancies and the pressure of the projecting bones of the pelvis. In both instances, besides the remarkable firmness and thickness of the organ, the situation of the rupture would negative such an explanation of the cause of the injury. The contractions of the uterus were excessive, and in one of the cases the ergot was given in very large doses, and the forceps applied during strong pains.'" 175.

According to the author's experience, this accident is liable to be induced by the resistance of a scirrhus of the os uteri; and it has been known to arise from convulsions, and from exostosis of the ossa pubis.

Notwithstanding the preceding remarks on attenuation of the uterus, the author admits that rupture has occurred from this cause, as well as from softening of that organ and ulceration of its lining membrane.* The laceration of the peritoneal coat he attributes to the irregular contraction of the uterine fibres.

After alluding to the different situations in which laceration of the uterus and vagina have usually been met with, the author proceeds to notice the circumstances indicating the probability of the accident occurring, and the steps necessary to prevent it. For information on this head, we must refer our readers to the work itself, where they will find useful remarks, the result of extensive experience.

The symptoms of lacerated uterus and vagina are next detailed; but, as these are familiar to the profession, we pass on to the treatment of these unfortunate cases. We cannot, however, leave unnoticed an extraordinary case, which occurred in the practice of Mr. Cook, of Coventry, as we have seen the exfoliated uterus alluded to, and can vouch for the accuracy of the statement.

"The absolute separation of the whole uterus from the vagina, as the result of laceration or sloughing, would seem quite incompatible with the preservation

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* "In one instance, Dr. Collins found the accident to arise from a venereal ulceration about the cervix uteri."—*Treatise on Midwifery, p.* 287.

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of life; but an instance of this kind, which terminated favorably, has been recorded by Mr. Cook, of Coventry. The separation took place the second day after delivery, and the specimen, which embraces the uterus in a state of inversion, together with its ligaments and a small portion of the vagina, has just been deposited in the anatomical museum in this place. The perfect recovery of the patient constitutes the singular and interesting feature of the case." 195.

"In treating uterine laceration before delivery, and in the last three months of gestation, we have to consider, first, the condition of the uterine orifice; secondly, the situation of the child; and, thirdly, the state of the general system. Respecting the treatment of this injury, under its least complicated form, by immediate delivery, little need be said. It is generally acknowledged in this country, that if the head be accessible to the forceps, it should be promptly abstracted —and if above the brim, provided it does not retreat when moderate pressure is applied against it, or can be sufficiently steadied by pressing the uterus externally, perforation must always supersede the dangerous operation of version in the abdomen." 197.

Immediate delivery, by introducing the hand through the fissure, is usually practised. In one instance, where this course was adopted, the author states that delivery was followed by a large protrusion of the intestines, and the speedy death of the patient. Gastrotomy will occasionally be found the best mode of proceeding. When the os uteri is not fully dilated, and the state of the patient will admit it, the author advocates the propriety of effecting dilatation without delay. With respect to gastrotomy, where such an expedient is indicated, it must be obvious that less risk will be incurred by it, than by allowing the child to remain within the abdominal walls; and several cases have been reported, in which the life of the mother has been thus preserved. It should not be undertaken while the patient is in a state of collapse, threatening instant destruction; but, at the moment the accident has happened, or after such a degree of re-action has taken place as may safely admit of manual operation. The life of the child is, in our opinion, of secondary importance in these cases; therefore it should be our main object to seize the critical moment most favourable for the safety of the mother, both on her own account, and that of the operator's reputation.

When the diameter of the pelvis is so reduced as to require the aid of craniotomy, it is questionable whether an opening, made into the abdomen, would not be safer than the tedious and injurious means often adopted to accomplish extraction by the former proceeding.

To promote the contraction of the lacerated parts, when recovery appears probable, the author advises the application of a healthy infant to the breasts of the patient, and to the abdominal surface a suitable compress.

Isolated, and surrounded by an envelope of varying consistency, acquired during its extra-uterine residence, the fœtus has been found incarcerated in the abdomen of the mother during many years, without occasioning any injury to her health, or shortening the duration of her after-life. An instance of this kind has been under the notice of our friend, Mr. J. M. Coley, of Bridgnorth, during a period of more than 30 years; and, as the patient has requested him to explore the contents of the abdomen after death, should he survive her, he will have an opportunity of recording the appearance of this ancient cyst and its contents.

As the after-treatment must necessarily be conducted on the general principles of preventing and subduing inflammation, whether the child may have

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been extracted or not, we need not follow the author in his detail of these particulars.

Nine cases of ruptured uterus and vagina are adduced by the author, seven of which were fatal, and two terminated in recovery. One of the favorable cases of rupture of the uterus occurred in the practice of Mr. Evans, who was assisted by Mr. Taylor and Mr. Ingleby in effecting delivery by craniotomy. The other happened to a patient of Mr. J. M. Coley's, at Bridgnorth. The laceration in this instance extended from the cervix nearly to the fundus, and the whole of the fœtus, except the feet, had escaped from the uterus. Mr. Coley, seizing the feet without loss of time, had no difficulty in effecting delivery.

6. Inversion of the uterus may be traced to the rude separation of the placenta, sudden expulsion of its contents, when the funis is unusually short, or the exit of a polypus during delivery, or when the uterus is in an unimpregnated condition. The author has also heard of two cases, in which inversion took place spontaneously immediately after the birth of the child.

After describing the usual kind of inversion, the author states that he has met with a variety occurring in the course of the longitudinal fibres, which, he believes, has not been noticed by other writers. The following he refers to as an instance.

"I was compelled, in conjunction with another practitioner, to apply the forceps under the disadvantage of uterine inertia. After the delivery of the child, there was no tendency to expel the placenta; but a portion of the mass having separated, a slight effort was made with the funis. The placenta descended considerably beyond the os internum, together with a quantity of the uterus, apparently the whole length of its right side, the left not being sensibly depressed. Flooding ensued. At the moment we were rather perplexed; but the nature of the displacement became evident, and the inverted part was immediately returned together with the placenta. The adherent portion of the mass was then separated without delay, and the case treated in the usual manner." 223.

The plan laid down by Merriman for the treatment of inversion, with the placenta adhering, appears to the author the best which can be followed, *i. e.* to reverse the uterus with the placenta, or, if impracticable, to pull off the latter, and replace the uterus without delay. The mode of returning the uterus is next described with much care and judgment. Should this organ be found inflamed, the author, who has only seen one instance of this kind, recommends delay, and the application of leeches and other appropriate applications.

Unless inversion is speedily noticed and replaced, the contraction of the os uteri renders it afterwards a difficult or impossible proceeding. Hence these cases have been too frequently abandoned to their fate. Several instances have, however, occurred, in which, at different periods after delivery, practitioners have succeeded in replacing the organ within its proper bounds. In one case, success followed the attempt at the end of twenty-four hours; in another, at the end of two days; and, in another, at the end of twelve weeks. Encouraged by these facts, our ingenious and persevering author also succeeded in returning an inverted uterus at the end of a week after the accident occurred, and while the patient was in a state of collapse, and apparently moribund.

The inverted uterus in one instance, noticed in a former part of this ar-

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ticle, has been known to slough away, the patient recovering without any farther injury.

When inversion of the uterus is of long standing, and its replacement is found impracticable, the patient is in constant misery, especially in the erect posture, or when the body is bent forward in any laborious occupation. Hence, the entire removal of the inverted part by the knife or ligature has been proposed and practised; and several successful operations of this nature are on record. The only danger apprehended from the knife by the author is hemorrhage, but he thinks that may be commanded by plugging the vagina with lint and oil, and by cold applied over the pubes. The patient may obtain relief by several contrivances; but the most effectual remedy is the old-fashioned pessary, described, we think, by Wiseman.

By means of this instrument, Mr. Coley, of Bridgnorth, to whom we have before alluded, succeeded in affording effectual relief to a patient, who had laboured under complete inversion during seven years, occasioned by a rude and forcible extraction of the placenta. The whole of the uterus was inverted through the os uteri, and hung between her thighs, and the fundus was ulcerated to the extent of a half-crown piece, and discharged an offensive matter. The inverted uterus and the os uteri, forced through the os externum, were exposed to view, and presented the appearance of a large malignant tumor, of the size of a cocoa-nut. By applying a gradual and gentle pressure, he succeeded in replacing the inversion, and the descent of the prolapsed os uteri was prevented by the pessary in question, which was secured round the hips by means of tapes. The patient was thus rendered quite comfortable, and the ulcer healed in a short time. She could now walk any distance without inconvenience, and the formidable operation of excision, which Mr. Coley had proposed, and to which she had consented, was thus fortunately superseded.

7. In the essay on the signs of pregnancy, the author's object is not to enter at large on the symptoms in general, but to animadvert briefly on the principal evidences, real or supposed, of the pregnant state; on the difficulty of forming a diagnosis; and on the circumstances denoting the cessation of life in the infant.

A. Vomiting usually ceases after quickening, and always after the death of the ovum. The cessation of sickness in the latter case may be explained, on the supposition that the stomach recovers its customary supply of blood and nervous energy, of which the process of fœtal germination had deprived it. Vomiting is generally more severe in first than subsequent gestations.

B. Uterine hæmorrhage, especially in the early months of pregnancy, is commonly destructive of the life of the embryo; yet instances have repeatedly occurred, of a sanguineous discharge continuing or returning periodically nearly through the whole period of utero-gestation.

C. In some women, but certainly not in all, soon after conception has taken place, the breasts become hard, tender, and painful; and we have observed this condition of the breasts accompany the development of an imperfect, as well as a perfect ovum. The dark areola commonly occurring, the author states, is the principal characteristic, and is most distinguishable in persons of a dark complexion. A scaly state of the areola, and a mottled appearance of the breast, are also considered by him as marks of pregnancy. The secretion of milk is an equivocal symptom.

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D. In twin cases, one of the fœtuses may die at any early period of pregnancy, and yet be retained in the uterus until the expiration of the natural term of utero-gestation. When premature expulsion of a twin occurs, the uterus expels the second fœtus in the course of a few hours or days. This is dependent on a principle inherent in that organ, noticed in our review of the author's work on hæmorrhage, which ensures a continuation of the expulsive efforts after a portion of its contents has been evacuated; and it applies to the discharge of hydatids or other imperfect ova, as well as the most perfect production.

E. Fetor of the discharges may precede or accompany the birth of a living or dead child, and is, therefore, no criterion of the loss of vitality.

F. The ascent of the uterus and the state of the os and cervix uteri, next attract the author's attention; but, as we meet with nothing of importance to detain us, we pass on to—

G. The state of the hypogastrium and the examination by the vagina. Having described the mode of exploring the hypogastric region, the author proceeds to the vaginal investigation. The most convenient position of the patient may be found to be the supine or lateral one; and, as he very correctly observes, the upright posture will occasionally be required to afford us positive information. At the end of the fifth month the uterine tumor is on examination distinctly perceptible in the hypogastric region.

Of all the means we possess of ascertaining the existence of pregnancy from the third to the fifth month, which is the usual period, when our diagnosis is solicited, the examination by the vagina is the most to be relied upon, if conducted by an experienced practitioner. Here our author, after describing the resiliency which the gravid uterus may be made to present, has omitted to notice other unequivocal proofs of pregnancy, *i. e.* the fluctuation and solidity, which a tutored finger may discover between the cervix uteri and the pubes, and the increase of diameter, which the upper part of the vagina will be found to have acquired.

Among the various diseases resembling pregnancy the author mentions enlargement of the spleen and liver, a polypous tumor, tuberculated peritoneum, fatty depositions, tympanitis of the uterus, ovarian dropsy, and fibrous tumors. Polypous tumors sometimes acquire a considerable magnitude. The author possesses one, which he says cannot weigh less than four pounds. The presence of such a disease, whether adherent on all its surface to the uterus or not, may be readily distinguished from fœtal impregnation by its solidity and other symptoms. When impregnation takes place, while a polypus lies concealed in the uterus, the growth of the fœtus and polypus will proceed at the same time.

H. Obliquity of the uterus may proceed from deformity of the pelvis and spine, distention of the colon, relaxation of the abdomen and retention of urine.

When the oblique position of the uterus renders pregnancy doubtful and hæmorrhage supervenes, the author inquires whether we should be justified in dilating the cervix uteri for the purpose of ascertaining the existence of gestation as early as the third or fourth month, and of rupturing the membranes. He is of opinion that we are, on account of the occasional fatality resulting from uterine hemorrhage at these early periods of utero-gestation.

"Whether, then, the signs of pregnancy be conclusive, or only strongly pre-

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sumptive, the propriety of passing the hand into the vagina and dilating the uterus, with the view of ascertaining its contents (provided hæmorrhage is protracted and dangerous to life,) must, I think, be admitted as a rule of practice." 260.

I. The abdominal tumefaction may, after a certain period of pregnancy, continue stationary through the remaining months. An instance of this kind is related by the author, which arose from the early rupture of the membranes and the continued discharge of liquor amnii. It appears at other times to proceed from a defective secretion of liquor amnii.

K. The combination of pregnancy with ovarian disease is not an unfrequent occurrence; and when hydrops ovarii accompanies gestation it sometimes happens that paracentesis of the abdomen becomes necessary. When the ovarian cyst extends to the vagina, this operation may be required to prevent the accidental rupture of the cyst during parturition. In one case the author punctured the sac through the vagina and extracted four gallons of gelatinous fluid.

Ascites is rarely associated with pregnancy. When this combination does exist, it may be requisite to relieve the former by puncture during the pregnant state, and several cases have occurred, in which this operation has been performed with perfect safety.

A communication between an ovarian cyst and the vagina is sometimes met with, and the author believes that a thin colourless fluid is occasionally discharged from the lining membrane of the uterus during and after pregnancy.

The subject of hydrops amnii, or dropsy of the amnion, is next slightly alluded to. This disease has attracted the notice of several authors, particularly Mauriceau, Lamotte, Baudelocque and Gardien. Mercier attributed the inordinate secretion to an inflammation of the amnion; while others, who have carefully examined this membrane, declare that no marks of inflammation could be traced in it. We believe it is the general opinion of the best modern pathologists, that it is a disease of the ovum, unconnected with the condition of the uterus. The diagnosis of this affection can only be arrived at with certainty by an examination per vaginam. When the finger is applied to the space between the os uteri, and the pubes, and percussion of the abdomen is effected, an immediate and distinct fluctuation will be perceived in the former situation. In this case also the cervix uteri will be found almost completely obliterated by the great expansion of the whole uterus.

L. The abdomen now and then undergoes a remarkable diminution during the pregnant condition of the uterus. This may proceed from the death of the fœtus, which notwithstanding may be retained from the third month to the full period of utero-gestation. It may also be explained by the rupture or expulsion of an adventitious sac from the uterus during gestation. May not these pouches consist of imperfect ovarian vesicles, which may have descended through the fallopian tube with the impregnated ovum? The subsidence of the abdomen may be dependent on the escape of part of the liquor amnii through an aperture at the side of the membrane, which, when occurring spontaneously, we know will frequently not interfere with the progress of gestation. The discharge of fluid from the chorion will be too insignificant to deserve our notice.

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M. Irregularity in the form of the abdomen may, according to our author, be produced by an irregular development of the uterus or fœtus, with a deficiency of the amniotic fluid. He is also inclined to suspect that it may arise from a separation of the recti muscles, or other faulty state of the abdominal parietes.

N. The motion of the fœtus, which is sufficiently characteristic without any description here, may be considered as the only positive evidence of fœtal existence. Yet the crawling movement has now and then been confounded with the action of the abdominal muscles, and the peristaltic elevations of the intestines. The experienced author, in his usual candid manner, confesses that he was himself deceived on one occasion by the latter circumstance, in a case which Mr. J. M. Coley, of Bridgnorth, had previously pronounced to be one of a malignant character and unconnected with pregnancy.

"I was desired to see a woman, in whom a tumour had developed itself on the left of the umbilicus, and on a line with it. It was slightly moveable, at times painful, but not on pressure; projecting considerably forward, sloping from its summit, and being about the size of the gravid uterus at the fifth month of pregnancy. Its texture appeared to be firmer in some parts than others, but this was owing to partial adhesions having formed between the general and uterine peritoneum. It afforded no sense of fluctuation, but on placing the hand over the surface of the tumour, a distinct crawling movement was traced in every part of it, but unaccompanied by the sudden impulse" (the ictus) "before alluded to. On internal examination, although the os uteri and the vaginal portion of the cervix were scarcely changed, the superior part of the cervix had degenerated into a tumour, quite as large as a child's head, exceeding it in firmness, but without the resilient property of an immature fœtal skull. Repercussion could not be produced, and the stethoscope afforded no evidence whatever of pregnancy. The tumour continued enlarging—the sufferings of the patient progressively increased, and the result was fatal. On examination, *post mortem*, it was found that the inferior part of the uterus had degenerated into a thick and fibrous, or fibro-cartilaginous substance. The fundus and body of the organ were converted into a large sac, not thicker than an ox's bladder, and contained three pints of dark, fœtid, muco-purulent fluid, the consistence of gruel. The mucous and fibrous structures of these parts of the uterus had nearly disappeared, and the peritonæal coat, though generally thickened, had become very thin in one spot, where it burst during the examination, and allowed a part of the fluid to pass into the abdomen. The fluid was prevented during life from escaping into the vagina by a quantity of tenacious mucous" (mucus) "which lined the sides of the cervix uteri, as in ordinary pregnancy." 277.

Hydatids have also been found to convey a sensation to the hand laid over the abdomen, resembling that of a living fœtus.

The colon is liable in females of hysterical habit to be thrown into a convulsive state from an irregular peristaltic motion of its muscular fibres, which, from the spherical form and firmness of the tumefaction, might be mistaken for an uterine tumor or pregnancy. Cases of this kind have been observed, particularly by Morgagni and Valsalva, in which an irregular motion, resembling the ictus of a fœtus or the pulsation of an aneurism, has been present. We have frequently met with these occurrences, and must confess, at first, were as much astonished as our author at the sudden manner in which these firm and globular swellings have taken place.

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The movements of the fœtus have, the author states, been suspended by hyoscyamus during nine or ten hours, and almost paralyzed by the full and continued action of ergot of rye.

Having made some remarks on the ordinary signs of death in the fœtus, the author next introduces the subject of—

O. Auscultation. By this valuable auxiliary the vitality of the fœtus may be ascertained at any period previously to birth from the commencement of the fifth month. The author believes the *soufflet* an uncertain evidence of pregnancy. The fœtal pulsation, which varies from 100 to 170, diminishes in frequency after the liquor amnii has been discharged. The action of the fœtal heart is sometimes too feeble to be distinctly heard. This was the case in a fœtus, before the Cæsarian operation was performed, in which instance the extraction of a living child confirmed the correctness of the mother's sensations. The diminution of the heart's impulse may, according to our author, be occasioned by the strong contraction of the uterus during severe pain, and disappear on the pain subsiding.

P. On the state of the funis during labour the author has nothing to add to our present knowledge on the subject.

Q. Various circumstances have a tendency to produce the death of the fœtus in utero; as a partial separation of the placenta, maternal fear, long-continued asphyxy, malignant fevers, external violence, &c. The most frequent of all the causes is certainly the venereal poison, which may remain for years or through life in a latent form, and yet be sufficiently active, sooner or later, to extinguish the spark of uterine existence in a succession of contaminated embryons. We have known this poisonous influence manifested on sixteen human germs in succession, the parents remaining apparently healthy, and, as it were, restoring their venomous constitutions at the expence of their offspring. The usual course of events is this: the husband contracts disease one, two, or more years before marriage, and, to all external appearance, is cured long before the marriage-ceremony is performed. Feeling conscientious on the subject, he takes the opinion of a surgeon, who assures him that, being free from all apparent infection, he may enter upon marriage with perfect security. Should his wife become pregnant, the probability is, that the fœtus will be expelled in a rotten state about the sixth or seventh month. Should conception not take place, it will be found that her system becomes poisoned, and syphilitic symptoms supervene of various character. The husband continues to enjoy his accustomed health: the virus appearing in him to have been modified by medicine, and rendered innocuous to his own frame. On this subject the author appears to us to entertain very sound views, and recommends both parties to undergo a mercurial treatment. The malignant influence of latent disease, transmitted from either parent to the fœtus, attracted the notice of the late Mr. Hey of Leeds, who published an essay on the subject, we believe, in one of the early volumes of the Medico-chirurgical Transactions. The period at which the elements of a disease, destined to annihilate the vitality of the human germ approaching to fœtal maturity, are absorbed from the maternal circulation, is uncertain. The author is of opinion that the virus is innocuous to the embryo during the first few weeks of his existence, and

"That when the child has acquired a size common to the sixth or seventh

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month, the changes wrought upon it through the placenta are unequal to maintain its vitality unimpaired." 293.

Mr. Ingleby's sentiments on the propriety of prescribing mercury to the mother in these cases, while in a state of pregnancy, correspond with our experience, which has been uniformly successful. When the mercurial treatment is carefully conducted, we have no hesitation in recommending its adoption at any stage of utero-gestation; and have invariably found this proceeding not only conduce to the safety of parent and child, but obviate the premature expulsion of the uterine product.

Having now completed our review of Mr. Ingleby's interesting book, it remains for us to add a few concluding remarks. The work before us is not one of those elementary compilations, which we meet with every day, adapted only for the initiation of the medical student: it is a production, which may be read with satisfaction and advantage by the most experienced practitioner and teacher; being the result of extensive occupation in the obstetrical department, assisted by reading and sober reflection. The liberal spirit which pervades the volume is deserving of imitation in medical writings; and, although we have ventured to differ in opinion with the author on a few points, we can recommend his publication as a safe and useful guide in practice.

The Speculum applied to the Diagnostic and Treatment of the Organic Diseases of the Womb. An Inaugural Dissertation, presented to the University of Glasgow, for the Degree of Doctor in Medicine. By *John Balbirnie*, A.M. Octavo, pp. 335. Longman, 1836.

There can be no doubt of the propriety, indeed necessity, of rendering medicine as strictly a science of induction as possible. The more exact it is the better. If Lord Bacon were to revisit us for a brief period, and to observe the alteration that has occurred in physic, since, in his "advancement of human learning," he discoursed on its condition in his own day, he would be astonished at alterations, which himself, the apostle of induction, has originated. Mead and Heberden, the ornaments of the old school, no longer represent the new. The foundation of their art was empirical observation. Such observation could never lead to any stable results, because its subjects were phenomena, themselves not simple, nor dependent on a single cause. Their diagnoses, prognoses, hypotheses, and modes of treatment were essentially derived from the study of symptoms. But as whole groups of symptoms are common to many different physical alterations, the investigation of them unconnected with an acquaintance with those alterations too, must continually perplex and frequently deceive. Hippocrates had genius enough to see the difficulties of his system, and the ars longa, observatio difficilis, experientia fallax of his aphorism, are the honest confessions of its peculiar imperfection.

The great instrument of improvement to modern medicine has been mor-

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bid anatomy. The benefits it has conferred are both positive and negative —positive, where it has shewn the physical changes which constitute some diseases—negative, where it has proved that no physical changes are essential to others.

In proportion as the alterations which constitute disease are capable of being appreciated by the senses, our notions of that particular malady are more determinate and satisfactory. This is the advantage which surgery possesses over physic. The subjects of the former are palpable and immediate—those of the latter more shadowy and remote. And the consequence is, that surgeons are frequently more exact in their ideas of disease than physicians are.

The more we can render symptoms objects of sense, the less likely we are to mistake them. This is so obvious as to constitute a truism. Yet such a truism was a subject of ridicule when Laennec first advocated auscultation. So obstinate is prejudice, so blind is error. Is there now a man in the profession who would publicly ridicule the principles of auscultation? Not one. Auscultation does no more than tend to render us better acquainted with the physical alterations of the lungs, by making their physical effects sensible. How absurd must they have been who could think this absurd.

The diseases of the uterus are not few, nor trivial. They affect a sex whose character and weakness claim our instinctive sympathy, and demand all our assistance. That sex is peculiarly circumstanced. It owes much of the respect that it receives to its exquisite perception of modesty and delicacy. Those feminine attributes are fostered and increased by the homage which men pay them, a homage the result of a high state of civilization, and the intellectual descendant of the grosser courtesies of the age of chivalry. To their sense of modesty, carried to excess, women chiefly owe their present high position in civilized society; and if it shall be found that some evils spring from it, they are probably only the customary tax which is paid for whatever is useful and precious.

Nature and reason, instinct and reflection, contribute to surround the generative organs and functions of women with mystery to themselves. Modesty is so wrought up with an apparent ignorance respecting their uses and their states, and with an aversion to all investigations into either, that we think even a whore shameless who does not evince a repugnance to the display of them. In the eye of philosophy this appears ridiculous—in the code of cold utilitarianism it may seem mischievous—but when the good and the evil that spring from it are balanced—when what woman gets by her modesty is set against all she loses by it, the advantage will probably be found on its side.

The study of diseases of the uterus is therefore a peculiar case, and it is not clear that we can apply to it the same principles which we employ in the investigation of the diseases of other organs. We can have no hesitation in endeavouring to ascertain the state of a female's lungs, by placing a wooden tube upon the chest, because this may be done without calling any blush, save that of trepidation, to the most modest cheek. But it is very doubtful what amount of good can compensate a young girl, or even a wife, for being placed upon a bed or table, her thighs held wide asunder, a speculum thrust into her vagina, and screwed open till all within is exposed, while a man is curiously looking in, by the light of the sun or of a tallow candle.

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Many of us know how delicately they manage all this in France. Dr. Balbirnie, the avowed "apostle" of the speculum, is fresh from that country, where he saw it employed upon a noble scale. M. Lisfranc has his appointed days for a "grande revue de speculum." Followed by a long array of young and laughing students, he enters the ward where the females are to undergo this chaste inspection. Each woman is on the bed, with her knees drawn up, and her thighs wide apart—the speculum is in. M. Lisfranc looks first. Dieu! que c'est magnifique! The students follow, and as the candle passes from one to the other, each looks intently up the vagina.

Impressed with the advantages of such inspections, Dr. Balbirnie advocates the use of the speculum extensively in this country, with singular earnestness and zeal. He sets out "upon the broad and irrefragable grounds,—

"1st. *That it is the imperative duty of the medical practitioner—a duty, which the best interests of humanity, as well as the obligations of his professional vow, imposes upon him—to arm himself with every means that can afford him more precise knowledge of the seat and nature of disease; and, consequently, render more rational and more certain his mode of treatment.* There is a path of duty plainly and palpably set before him, which he cannot flinch from. And he must set himself boldly, but delicately, to oppose the very hurtful, though very pardonable, prejudices, that interfere with the discharge of this duty, and that tend to perpetuate the evils that are the lot of the fairest portion of humanity.

2d. *That the practitioner is not competent to give advice on the diseases of the womb particularly, nor to undertake their treatment, till, by a speculum-examination, he has fully satisfied himself of the pathological condition of the organ he has to do with.* This will appeal to the good sense of every man, as the only method that will produce results, important both for science and for humanity.

We know well the tenacity in the minds of men of long-cherished prejudices, and old-received opinions. We shall be called by many, doubtless, an *innovator*. But we have the consolation to think, that all the best contributions presented by science to modern medicine, have met with opposition; ay, and virulent opposition sometimes; and their advocates have been styled *innovators*. What opposition did not Harvey's discovery of the circulation of the blood create! He, also, was an *innovator*. How was the introduction of the vaccine inoculation first received? Jenner, also, was an *innovator*. The science of auscultation, also, was once opposed in Great Britain; and is, perhaps, still opposed by the physicians of the 'ancien régime.' But all these have long achieved their triumph, and each created a new era in the history of medicine. Doubtless, a similar opposition awaits the speculum; but we hope for it ultimately a similar triumph, and that it will create for itself a similar era. We go forth its advocate. We proclaim ourselves, *'the apostle of the speculum.'* With that instrument we link our fate; and by that we will stand or fall." 14.

This is very heroic. All hail, Balbirnie, apostle of the speculum! A holy mission. We may imagine the zealous saint, eager to enter on his ministry, sallying forth and brandishing his peculiar weapon. We may conceive him addressing a crowd of ladies, and earnestly entreating them to allow him to experiment on each and all with the most religious sanctity and secrecy. He would implore them to open their "sanctum sanctorum," with such protestations as these.

"We hope, that so far as regards ourselves, all that dignity and that delicacy of feeling which ought to distinguish the medical character, will be for us a solemn

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duty, and a solemn observance, never to be infringed, never to be compromised. If at any time the medicel character should merge into, and invest itself with all the sanctity of the sacerdotal, it is certainly in such circumstances. He is for the time a high-priest—the alone privileged to enter into a *sanctum sanctorum*, whose recesses are not to be exposed to vulgar gaze, as its revelations are to remain buried in the depths of his own heart." 20.

Could the ladies resist such a moving appeal—could they remain obdurate while the Doctor prayed and screwed and unscrewed his favourite implement? He would undoubtedly prevail, for he is convinced and he assures us that:—

"The difficulties on this score have been magnified by practitioners. If the physician is firm in insisting on the necessity of such examination, and if he knows how to do his duty in this way properly, shewing a corresponding personal delicacy, and sympathy for their situation, the very pardonable scruples of the patient will give way to her good sense, and the natural timidity of the sex will yield to the sentiment of self-preservation. The ladies are not obdurate. Their character is to be 'gentle and easily entreated.' They will be reasoned with, and submit to what is reasonable. When it is their own best interests that are at stake, they will see the prudence and propriety of a timely submission to every means necessary for their cure: and the results of the investigation—the satisfaction and assurance of their own mind as to the nature of the disease, and a rational and successful treatment founded on it, will be to them an ample recompense for the painful sacrifice of their delicacy it for the moment exacted." 20.

It must be owned that the Doctor is somewhat empressé, and that he has an itching palm for pulling up the ladies' petticoats. It remains to be seen whether they will be so easily entreated as their apostle appears to believe. That is a matter for him and for them to settle between them. Dr. Balbirnie's new-born ardor reminds us of what Sheridan said of one of his countrymen, Lord Glenbervie. His Lordship, a highlander, had always worn kilts until his appearance in the House of Commons. He entered it arrayed in a large pair of breeches. "Look at Glenbervie," said one of the members; "did ever man wear such enormous breeches." "Ah," cried Sheridan, "converts, you know, are always enthusiasts."

When we examine the reasons that may be urged in favour of the speculum, we shall probably arrive at some such conclusions as these.

Its employment may be painful, and is disgusting. It is highly disagreeable to the surgeon or physician, and must be revolting to every woman of delicacy. Strong reasons only, in any particular case, can justify its use upon modest females.

The characters of the discharges and the general symptoms, will usually enable us to determine whether the uterus is affected. When they are insufficient, we possess a means of physical examination which, in the great majority of cases, is quite as satisfactory as the employment of the speculum, and possesses not the hundredth part of its indecency. We mean, of course, examination by the finger. One would suppose, from Dr. Balbirnie's florid enumeration of the benefits arising from the use of the speculum, that it was impossible to distinguish by the touch chronic enlargement of the neck of the uterus, or ulcerations upon it. The fact is that most of the diseases of the neck are detected without much difficulty in this manner. If uterine diseases are often overlooked, it is not because we want the means of ascertaining them, but because the modesty of patients prevents our resorting to them.

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In other words our ordinary mode of diagnosis is little used because indecent, while, compared with the speculum, it is modesty itself.

When we set against that instrument these objections—that its employment is disgusting—that it helps us little, or not at all in the most obscure cases, those in which the body or fundus of the uterus is the part affected——and, that in the great majority of instances, other means of diagnosis are sufficient for ordinary practical purposes—we seal the fate of the speculum, as an instrument of common application. We venture to prophecy that it never will come into *general* use in this country. Nay, we will go so far as to observe that it is right it never should. Not but that additional exactness is an excellent thing; only, in this case it would be bought too dear. The fact is that there are two parties to the bargain—the doctors and the ladies. If the former were ever so inclined to use the speculum, the latter may, and they will reject it.

The cases in which there are the least moral objections to the instrument, are those of a venereal character. If a woman has been immodest enough to be poxed, she may very well afford to submit to the introduction of the speculum. Yet the surgeon will be disappointed, if he anticipates *often* finding syphilitic ulcerations deep in the vagina. We regularly examined for some months with the speculum, the women admitted into the Lock Hospital. In only two or three instances did we find deep ulcerations, and, in each of those, if our memory serves us, there were sores on the external parts. The only interesting fact that we elicited was the frequency of uterine discharges.

After the eloquent advocacy of the speculum, to which we have sufficiently alluded, our author presents us with a "brief historical sketch of the diseases of the womb, from the father of medicine downwards." The heading is ambiguous, and, at first glance, reads, as if Dr. Balbirnie began with the diseases of the womb of the father of medicine. This, however, is not the case, for it is upon the doctrines of Hippocrates, and not upon his womb, that our author descants. The sketch of the opinions of the ancient doctors is amusing and not useless, but would of course be out of place here. We shall only extract one passage, alluding to by-gone notions of hysteria, which, although familiar to many of our readers, will probably be new to others. The ancients, it must be premised, regarded the uterus as almost a separate being, an animal in animale. They were sorely puzzled what to think of it in cases of hysteria,

"The symptoms which constitute this state, were attributed, as every one knows, to the circumstance that the womb, capable of locomotion in the abdomen, was transported sometimes to the right, sometimes to the left, sometimes ascending above, at other times shifting below. Now, it was to the movement of ascension, and we know wherefore, that the severest accidents were attributed. And because disagreeable odours appeared to exercise a special salutary influence on women in this state (any thing, in fact, which produces a lively impression, has the same effect), it was concluded that the womb avoided disagreeable odours, and that, on the contrary, it sought perfumes. Hence the practice, as absurd as indecent, of offering it perfumes, by means of aromatic pessaries, or fumigations, carried into the vagina by instruments made express. These ideas Moschion blames; and he is the only author who, until a very recent epoch, has talked with so much good sense on the subject. For Chambon, indeed, whose work was printed in the year VII. of the French republic, recommends

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still these means, and repeats with the ancients, that it is a mode of distinguishing the suffocation of the womb from other diseases which have some resemblance to it." 33.

The first chapter, for we now fairly enter on the work, is on the uterus and its exploration. An anatomical description of the organ is presented. It might have been judiciously withheld, for there is in it nothing new, and our author merely copies from the systems of anatomy.

But the mode of exploration with the speculum is more deserving of attention. Many, perhaps, of our country readers may not feel quite at home in this, and as the speculum will probably be employed more than it has been, we think it may be well to extract the directions of Dr. Balbirnie. He is speaking of the two-branched instrument of M. Ricord.

"The patient is placed upon the side of a bed, a pillow under the shoulders, and under the head, the thighs semi-flexed upon the pelvis, the feet resting on chairs, placed at either side. The practitioner stands between, and has no need of an assistant; a thing very important in private practice. The speculum, slightly warmed, if it is cold weather, is anointed with an oily substance, to permit the instrument to slide more smoothly, and with less pain; and which does not alter the appearance of the secretions, nor of the tissues, to be observed. The valves of the speculum, held in the right hand, are firmly compressed. Separating, then, the great and the small labia with the ring and index finger of the left hand, the fourchette, and the posterior part of the vaginal ring, are, at the same time, depressed with the middle finger of the same hand. This manœuvre, very important for facilitating, without pain, the entry of the speculum, ought to be made in a gradual manner, but sufficiently strong. Then, the extremity of the speculum is presented to the vagina, its branches turned towards the left thigh; whilst the edge of the extremity of one of the valves is placed strongly against the left middle finger; placed, as we have said, the plain surface of the other branch is applied against the posterior face of the prominence of the meatus urinarius, beneath which it is made to slide by a rapid motion, without excoriating or injuring this part, as happens frequently by the other methods. As soon as the exterior opening is cleared, which is the most difficult and painful part of the process, the instrument is guided in the direction of the known axis of the vagina, its valves being more or less separated, to permit us to explore, successively, the whole length of the vagina, before it goes to embrace the neck of the uterus. The position and height of the os tincæ being ascertained by the previous touch, the extremity of the instrument is directed accordingly, recommending to the patient, to make no expulsive efforts, which would obstruct the progress of the instrument. In thus gently separating, with the end of the instrument, the upper and posterior walls of the vagina, we soon reach the neck, which is recognised by its smooth polished mucus, and by its tint, differing generally from that of the vagina. In some cases, the glairy mucosities, exuding from its orifice, and descending in the vagina, indicate the route to follow. If, in spite of these indications and precepts, the end of the speculum is engaged in the *cul de sac* of the vagina, instead of continuing to push, a slight movement of retreat, in separating the valves, generally succeeds in seizing the os tincæ.

The speculum, introduced, is kept in place by a slight pressure; and a brush of charpy is carried into the interior, to wipe the surface of the neck, which is usually covered with mucosities, even in the sound state.

All these researches must be made in a clear light, to see, thoroughly, the cavity of the speculum, and the neck of the uterus. The patient is, for this purpose, placed before a window, or a candle is used." 47.

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The following are enumerated as the states which contra-indicate the employment of the speculum.

"The presence of the hymen; and the extreme narrowness of the vagina in virgins; the rigidity which its orifice acquires in some old women; the excessive sensibility of the parts, in some cases, which may go the length of determining nervous accidents, by the slightest contact; painful and deep ulcerations of the vagina, and of the womb, are so many contra-indications. Obstacles, sometimes, occur in the cavity of the vagina, which is divided by membranous partitions. M. Lisfranc once met, at an inch from the os tincæ, a circular membrane, pierced with a central orifice, which opposed an obstacle at once to the touch, and to the speculum. The same practitioner met with a kind of *stricture* of the vagina, towards its superior third. The vagina may be, also, the seat of tumours, which prevent the speculum from penetrating.

The state of the womb itself interdicts, sometimes, the use of the speculum. Bleeding, and deep ulcerations of the neck; its enormous development; the fungosities which arise from its surface, prevent, and render even useless this means of exploration. The inflammatory engorgement of the neck in a very acute stage; that of the body of the organ, and the extreme sensibility with which this last state is accompanied; a sensibility which extends to the suspensory ligaments, and which the slightest movement increases." 48.

Of course the speculum should not be introduced at the catamenial period, nor during menorrhagia.

We think we need say no more on the employment of this instrument. In the present constitution of society in *this* country, we are confident that it will not be generally submitted to by females in the respectable classes. The cases in which it is absolutely necessary are not numerous, and in none but those would a physician or surgeon venture to propose its application to an English lady. We are not now reasoning the case in any way. We are simply stating what we believe to be the fact. Whether Dr. Balbirnie's persuasions will alter the feelings of females on this subject, or whether, with the changes occurring in society, they will eventually alter themselves, is a question which we do not pretend to discuss. We speak only of things as they exist.

But, in hospitals, and especially in Lock Hospitals, the speculum may and should be more extensively employed. It is a means of obtaining additional exactness in our acquaintance with disease, and that is sufficient to induce a philosophical physician or surgeon to employ it, whenever the opportunity presents itself.

The succeeding chapters are eleven in number. They are occupied successively with the consideration of the following subjects:—The Causes of the Organic Diseases of the Womb—The Symptoms of those Maladies—The Disorders of Menstruation—Uterine Hæmorrhages; Discharges of Blood that are not Menstrual, and not the Result of Child-birth—The Mucous Discharges from the Vagina, denominated, when simple, Leucorrhœa; when specific, Gonorrhœa—The Ulcerations of the Neck of the Womb—The Simple Hypertrophy, Chronic Inflammation, and Engorgement of the Womb; and the Simple and Scirrhous Induration—Cancer of the Womb—Polypi, and Fibrous Tumors of the Womb—Medical Treatment of the Organic Diseases of the Womb—Surgical Treatment.

Such is the Bill of Fare. A slight acquaintance with the obstetrical

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cuisine, informs us that there are in it several French dishes. Much has latterly been done in France to give precision, by dissections, to our knowledge of uterine diseases, and it must be owned that some of the older practitioners in this country are sadly in want of this sort of information. Our accoucheurs, till lately, were at a stand-still in pathology, and were far too busy on the surface of their craft to attend to the interior. They became excellent midwives, but *midwifery* was still their art. Such men as Dr. Robert Lee, Dr. Merriman, Dr. Locock, and others, have raised that art into a practical science, and have redeemed the characters of English accoucheurs. Perhaps, therefore, a survey of some of the chapters of this book, may enable us to pick up some useful knowledge for our older, or less experienced readers.

The second chapter is on the Causes of the Organic Diseases of the Womb. There is nothing novel nor indeed striking in Dr. Balbirnie's observations. He enumerates as causes of uterine maladies, the congestions it is liable to, in menstruation, in child-birth, in venereal congress, at the cessation of the catamenia: and he dwells, properly enough, on the bad effects of venereal indulgence, and on the influence of moral impressions. The only points to which we think it necessary to advert are these.

1. Organic alterations of the womb seldom occur before the age of puberty. But M. Lisfranc has seen patients, who dated the origin of their complaints to a period prior to that epoch; and M. Carron du Villards has met with a polypus, with engorgement of the body of the womb, in a child of seven years old.

2. Dr. Balbirnie alludes to a cause of disease of the neck of the uterus, which obtains, perhaps, more frequently than is imagined. It is observed, he remarks, in very young women, that the affection usually occupies the body of the womb, while, in those living in sexual communication, it is the neck that is the seat of the disease. Here, there is a direct action—a positive contusion of the neck—the result of venereal excesses, or of the disproportion of the organs. It is common in the newly-married.

3. He gives a hint with respect to scanty menstruation, which is worth attending to. Corpulent women, he says, with scanty menstruation is so common a circumstance as hardly to constitute a pathological state; but if the patient is thin and meagre, the reverse of plethoric, and with but a scanty menstruation, we may be almost certain that there is something anormal as regards the state of the uterus. It is difficult, perhaps, to determine the exact relation between the corpulency and the scantiness of menstruation; the relation, we mean, of cause and effect. When menstruation ceases women usually become corpulent, and so they do when it diminishes. Thin women usually menstruate too much, and, probably, are thin because they do so. When they remain thin with slight menstrual discharge they had best look to it.

4. Why does cancer attack the womb? Why does it attack the breast, the tongue, the testicle, the bones? The reason is equally difficult in all cases. No doubt there is a predisposition to the morbid change in some persons, which is little more than saying that some persons get it because they get it. That predisposition is, probably, connected with some subtle peculiarity of structure, for it is seen to prevail in families.

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Bayle* mentions having seen, in a family composed of five individuals, a cancer of the breast in one, of the face in another, and of the stomach in a third. A woman, who died of an ulcer of the womb, had two sisters, one of whom died of a cancer of the breast; the other, then living, had a cancerous tumor of the neck. In another family, the father had a cancer of the tongue, and the son a *noli me tangere* of the face. M. Lisfranc mentions a family composed of seven daughters, the mother of whom fell a victim to cancer of the womb, and in which it has proved fatal to several of the others, and some have been attacked with uterine disease in a less or greater degree.

The third chapter is on the symptoms of the organic diseases of the womb. There is in it much "more noise than wool"—something to read, but little to remember. The author retails the sentiments of French authors, especially of M. Lisfranc, the droppings of whose cliniques into his pages form a considerable portion of their contents. Our object is not criticism, or there would be little difficulty in finding matter for it; but the selection of what may afford our readers an useful hint. The only passage that will answer our purpose is the following.

"But the attention of practitioners deserves to be called to the subject of *prolapsus*; for a prevailing error has run through all the books of practice as regards this point. Here the *descent* is all that is looked to; and without taking into consideration the pathological state of the organ which has produced it, the application of a pessary is counselled: and it is not to be wondered at, if, instead of seeing the symptoms disappear, they become only aggravated by the presence of a foreign body, which adds to the intensity of the original cause —the irritation and engorgement of the womb. This descent is attributed by accoucheurs to a primitive weakness and relaxation of the ligaments of the womb. But this is purely hypothetical and gratuitous. We cannot appreciate this primitive weakness and relaxation of the ligaments. We know not what it is, nor have all the books on midwifery demonstrated it. But here is a cause, plain and palpable, that appeals to the reason of every man. The descent is, in fact, a uniform and universal result of the engorgement—augmentation of the bulk of the womb—a mere consequence of the law of gravity, and with which a primitive weakness of the ligaments, which is extremely forced and conjectural, has very little to do. We do not deny, indeed, but that in some cases the ligaments of the womb may be occasionally weakened, as accoucheurs contend, to account for this symptom. But such cases are extremely rare: so much so, that M. Lisfranc and others, who have had the greatest practice in these diseases, affirm never yet to have seen a case attributable to this cause." 68.

Our author goes on to observe, that ulcerations on the neck of the uterus are a frequent cause of the engorged condition, which, as well as the prolapsus, usually disappears when the ulcerations are healed. He cautions the practitioner against the recommendation of coition, for prolapsus uteri, a recommendation offered with the view of inducing pregnancy.

There is no doubt much sound sense in the preceding observations, and much truth in the denunciation of the abuse of pessaries. But there can be little question that Dr. Balbirnie goes rather too far when he repudiates, as he

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* Traité des Maladies Cancereuses.

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seems to do, the notion of prolapsus occurring independently of actual uterine alteration. Such cases are not so common as the world believes, but they are more common than Dr. Balbirnie implies.

The two succeeding chapters—on the Disorders of Menstruation and on Uterine Hæmorrhages, are avowedly little more than transcripts of M. Lisfranc's lectures. An easy mode this of writing a book. The French Professor combats errors very prevalent in France, which the verbatim translator would have us think, or thinks himself, are equally prevalent in England. But he is deceived, and pages of inapplicable verbiage might be usefully put into Mr. Bramah's press, and reduced to an appropriate—a trivial bulk. The points deserving notice in these same chapters are the following.

1. Dr. Balbirnie informs us that amenorrhœa and dysmenorrhœa are not, as is commonly supposed by practitioners, essential diseases, but depend, in the great majority of cases, on an engorged state of the uterus. For a knowledge of this, he says, we are indebted to that speculum which he ever lauds. Now amenorrhœa and dysmenorrhœa are, on the whole, affections of young unmarried females, and we may conceive the sort of delicacy which would lead us to use or to propose *such* an instrument in such patients. What practitioner ever dreams, in a case of this sort, of even hinting at "the touch?" There are few young ladies who do not, before marriage, suffer more or less from one of these affections, and few, we suppose, did our author's notions become fashionable, would fail to have had the speculum thrust into their vaginæ before they entered on the state of matrimony. Happy æra! fortunate generation! so philosophical as to discard those obsolete notions of propriety and decency, which proved in our forefathers, as well as in our fore-mothers, so imperfect a civilization. The recommendations of Ovid to the young and erring bride will no longer be required, to enable her to hide her crime. The speculum will henceforth afford an apology for virgins without virginity, and for brides whose passions have been troublesome.

It is difficult to conceive where Dr. Balbirnie ascertained the nature of the professional information of his countrymen. He every where attributes to them so strange and so utter a lack of information, that we should doubt his intimate, certainly his personal acquaintance with the best practitioners. When he knows them better, he will find that they do not either view or treat amenorrhœa or dysmenorrhœa, in the unphilosophical and empirical manner he supposes.

But we tax the speculum, used indiscriminately as it appears to be, with the very fault its advocates profess it alone obviates—we tax it with occasioning empiricism. What should we think of a man, who settled all questions concerning the state of the leg by a glance at the great toe? The person who affects to determine, by a view of the os uteri, what the state of the whole uterus in all cases is, commits almost as great an absurdity. One would imagine that we possessed no valuable indications of the condition of the uterus in the general, and in particular symptoms, independently of what either sight or touch could offer. Such must be the conclusion that an inexperienced reader would draw from the constant tenor of Dr. Balbirnie's observations; yet that conclusion would be utterly preposterous. We do not say that the assistance of the speculum would not be both desirable and

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valuable, supposing there were no material objections to it. But we do say that, in the great majority of cases, both of amenorrhœa and dysmenorrhœa, we can do very well indeed without it, and that no man possessed of a sense of propriety would dream of recommending its employment.

In what Dr. Balbirnie says of the abuse of emmenagogues we coincide with him. The only point on which we differ from him, is in conceiving that the well informed do abuse those remedies. There is not a good physician in this metropolis, who, on a case of amenorrhœa or dysmenorrhœa presenting itself, would not carefully investigate the circumstances, to see what was wrong in the particular instance, and endeavour to set *that* right. Whether London physicians would do what follows is not quite so clear. We are presented with a *young* patient of feeble health, of soft flabby tissue, in whom the *presumed* age of the menses has arrived, and yet the *prodromes* of it are wanting.* For such a patient, in addition to baths and exercises, local means also are to be employed.

"Stimulant foot baths, *aromatic fumigations*, small lavemens, *very hot*, warm injections into the vagina, if the hymen permits it: in like manner, local hot baths established in the vagina, by putting the pelvis in an elevated position; emollient hip baths; warm cataplasms around the pelvis and to the pudendum; *dry cupping-glasses*, or scarifications in *the vicinity*; blistering, or sinapisms; the application of leeches in small number to the ankles, to the legs, to the internal and upper part of the thighs, rarely to the vulve; small blood-lettings from the foot; partial baths, in which the water is to the height of the knees, experience having proved to M. Lisfranc, that the baths in which the feet are merely dipped, are more injurious than useful." 83.

There is a pretty category. Imagine the assiduity of the medical attendants on this young lady. In rapid succession, or perhaps at once, her doctor, ascertaining that her hymen will permit it, syringes a warm injection into her vagina—behind, her nurse is anxiously throwing up a lavement very hot—the cupper has succeeded in fixing some dry cups on her pudendum—whilst the mother is invoking the unwilling uterus with an aromatic fumigation. Attacked in front, in rear, upon the flank, can the enemy resist? The blushing girl, but recently instructed in the alterations of puberty, discovers with astonishment the importance of parts of which she scarcely thought before. Incense is offered—oblations are paid—to that animal in animale, with which she is made so particularly acquainted, and her sense of modesty must be infinitely heightened by the delicacy of the various means that are resorted to. It at first seems odd how a local hot bath can be established in the vagina, by putting the pelvis in an *elevated* position. We would suggest a method more effectual, and quite as efficacious as any that we read of—let the interior of the vagina communicate, by means of a leathern tube and pipe, with a reservoir of warm water at some height. This is the mode of filling baths adopted in hospitals, and would answer excellently in supplying the vagina. Or, a small apparatus, like a fire engine, might be made constantly to play into it. Seriously, who does not see that

* Our author has imported a whole vocabulary. Scarce a page that has not its half dozen of Gallicisms. The construction of the sentences is neither French nor English, but something between both—a singular lingo.

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measures of this description are not at all adapted for respectable young females in this country?

2. We may extract the following observations of M. Lisfranc.

"He has met with women who did not menstruate but every five or six months, or every three, four, or even six years. Sometimes they are habitually suffering, and then the indication is the same as for those who do not menstruate at all; at other times they apparently enjoy good health. But we must be upon our guard, that this deceitful calm does not seem to disguise some grave affliction, which will be revealed at a later period: a disease of the heart; a latent peritonitis, or some chronic alteration of the pulmonary organs. M. Lisfranc has known three young women who had not had children, and who menstruated but rarely: all the three died, one of them at the age of twenty-one, of disease of the heart; the others at the ages of nineteen and twenty-four, of tubercles in the lungs. The defect of menstruation, was it the cause or the effect of these accidents? He inclined to the former opinion; because, in the first instance, these women offered no symptoms of the diseases they died of, and which were only consecutive. Do we not see every day, the establishment of the menses dissipate grave disorders affecting other organs? From these considerations, M. Lisfranc thinks it useful to practise from time to time a small revulsive bleeding from the arm, and to prescribe an appropriate regimen. Frequently, when the amenorrhœa has been conjoined with some grave affection of another organ, the appearance of the menses has been seen to revulse powerfully, and to dissipate this last disease, or at least to arrest its progress. The professor has followed the principle laid down, with great advantage, upon many women. Among others, one aged thirty-six years who has not menstruated for six years, finds herself well from this precaution. To do nothing in such a circumstance would be at least a fault." 89.

There is no doubt that amenorrhœa is both the cause and consequence of visceral disease. To ascertain which it is in a given case, it is necessary that the particulars of that case should be investigated. One word with regard to revulsive bleedings, so fashionable in France. They are not practised to nearly the same extent in this country, nor need they be, for here the value of purgatives is much better understood. We are not here preferring the one or the other, but simply stating the fact—that purgatives, with our females, are the substitute for leechings and bleedings abroad. If we are to judge by Dr. Balbirnie's book, itself an echo of Continental practice, we should say that, in all that concerns remedies, we are much in advance in these maladies, as in most others, of our foreign neighbours.

"Stormy menstruation" next attracts the attention of our author, or rather of M. Lisfranc; but we see no inducement to launch ourselves upon its troubled waters.

3. The only remaining point, indeed, in this chapter requiring allusion, is embodied in an observation on the cessation of the catamenia. We are not, says our author, to allow ourselves to be led away by the opinion long time taught, that affections of the womb are more frequent at this time than at any other. It is from twenty to thirty-five years of age that the sexual organs are most exercised; it is between these two ages that their diseases are, also, most frequent. All our observation in the hospitals is confirmatory of this fact. It is not generally conceived that affections of the womb are, in the gross, more frequent about this epoch, but that cancerous alterations are so. And there is every reason to believe that this is true. With this reservation, Dr. Balbirnie's remark deserves attention.

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The fifth chapter, on Uterine Hæmorrhages—Discharges of Blood that are not Menstrual, and not the result of Child-birth—may present one or two topics to detain us.

Uterine hæmorrhage, dependent on diseases of the womb, is no doubt frequently mistaken by ill-informed persons for the menstrual flux. A dangerous error, and one that is not likely to be committed after a moderately careful investigation of the circumstances. We need not stop to point out the distinctions between such hæmorrhage, and the catamenia. They are simple, and must be familiar.

But, when hæmorrhage of this description has lasted for some years, and become a habit, its sudden suppression may be supposed to be, and is dangerous. The following cases, related by M. Lisfranc, are to the point.

"One of M. Lisfranc's patients, aged twenty-eight, having never had a child, was subject, during twelve years, to discharges from the uterus, appearing regularly before the menses. The first time that he wished to suppress the hæmorrhage, she was attacked with peritonitis, as the consequence: on the second attempt, notwithstanding preparatory bleedings, peripneumony declared itself: the third time, it was an inflammation of the meningeal membrane. All these accidents yielded, as if by enchantment, to the application of leeches to the pudendum.

Another of his patients suffered, during eight years, a similar discharge, kept up by an engorgement of the womb. A revulsive bleeding from the arm arrested the hæmorrhage, but there supervened cephalalgia, or some other affection, which was only dissipated on the return of the flux.

Another young patient of his, having tubercles in her lungs, experienced abundant sanguineous discharges. 'I was here upon my guard (says the Professor), not to suppress them entirely; I only endeavoured to moderate them; and, as an aggravation of the disease of the breast threatened, I took care to recal the blood towards the womb. By this simple, but rational conduct, I had prolonged the existence of this young patient for three years, during which the phthisis seemed to be rendered stationary. She went into the country: the new physician, who had the charge of her, had no other anxiety but to suppress this uterine hæmorrhage, to which he attributed the feeble health of his patient: in a few months she was conducted to the tomb.'* " 101.

The causes of uterine hæmorrhage are various, and we need not enumerate them. It is the practitioner's business to ascertain their nature in particular cases. But our author looks on the hæmorrhage in a triple view.

For, first, either the principal affection is curable, and the discharge may be suppressed without danger; or, secondly, the hæmorrhage is connected with a grave affection of some other organ, which its suppression would inevitably aggravate; or, lastly, it depends on an incurable uterine affection. The fact is, that the general principles which regulate our treatment of the hæmorrhages, must regulate us in the instance of the uterus, and to these general principles, we see in the pages now before us no important addition.

The sixth chapter is on leucorrhœa and on gonorrhœa. It offers even more decidedly than those before it, an example of the hop-skip-and-jump style of writing. Every thing is positive—the representations of disease are tableaux—the speculum achieves miracles—the treatment is slap-dash.

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* Leçons de Clinique.

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It is eminently the chapter of one who takes what others have said for his creed, and gives, at second-hand, Continental professorial pathology.

We are told, for example, that "the general application of the speculum in France, within the last few years, to the diagnostic and treatment of the diseases of the womb, has thrown an entirely new light on the pathology of this very common and very inconvenient infirmity in woman, as well as given an almost infallible certainty to its therapeutic."

That routine practitioners are apt to look on leucorrhœa with a very empirical eye, it would be improper to deny; but that well-informed men commit such monstrous and absurd mistakes, we are by no means disposed to admit. They connect the discharge with the state of the health and of the part, and suit their general and local remedies to both. What good physician, what practical surgeon, when a case of leucorrhœa is presented to him, does not try to ascertain whether it depends on a chronic inflammation of the uterus, or simply on an atonic condition of the mucous membrane of the vagina, and of the vaginal and uterine follicles? Our author would have us believe that general symptoms do not enable us to form an opinion. As practical men, we contend that, in the great majority of instances, they do, and it is only when the disease resists the means which those general symptoms indicate, that we are called upon, in most instances, to request the opportunity of instituting a more particular examination. But let us listen to Dr. Balbirnie.

"What is the pathological condition of the organ which furnishes this discharge, as demonstrated by the speculum? *Chronic inflammation, engorgement, ulcerations and erosions of the mucous membrane of the neck of the womb, and of its orifice*, in the infinite majority of cases. The great seat and source of the discharge, we have already mentioned to be *in the mucous follicles of the interior of the neck; and rationally and effectually to cure the disease, our remedial applications must be made to bear directly upon that point; which cannot be done without the speculum*. When the thick mucosities which frequently cover the os tincæ, and obstruct its orifice, are cleared away, there is, in the simplest cases, an erythematous blush, of greater or less extent, around the orifice, and sometimes invading the whole neck. Upon the greatest number exist superficial ulcerations of one or both lips, and very frequently running in the orifice of the neck. The deep red tint of the affected parts forms a lively contrast with the white greyish colour of the surrounding sound portion. Sometimes the whole surface appears as if covered with granulations, which are nothing else than the enlarged mucous follicles of the membrane. In the acute *vaginitis* this granular appearance is very remarkable. Sometimes there is a true irruption of *herpes phlictenoides* on the os tincæ. When the disease is of considerable duration, the ulceration extends profoundly into the neck and cavity of the uterus. The parts which are the seat of these lesions offer, in the greatest number of cases, an augmentation of volume. Sometimes the anterior lip is hypertrophied; sometimes the posterior, or the whole neck: it is sometimes enormously enlarged; and we have seen ulcers on it of two inches to two and a half inches in extent, covered often with a glutinous secretion, of a greyish yellow colour, and resembling a wound attacked with hospital gangrene. The displacement and descent of the womb almost universally accompany this state; as also anteversion, retroversion, and the lateral inclinations." 110.

Who does not see in this a caricature, rather than a plain and faithful picture? The great majority of females above twenty years of age labour, more or less, under leucorrhœa. Yet in how small a proportion do serious

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pathological changes exist: in how large a number, is the essential condition a passive affection of the mucous membrane of the vagina and the uterus. Such representations as the one we have extracted are, however, useful. Their very extravagance makes them striking, and arrests the attention of careless and indolent persons. We repeat that we agree with Dr. Balbirnie in lamenting that too many entertain most empirical notions of the nature of leucorrhœa, and, perhaps, they may be awakened by such a blast as the one Dr. Balbirnie has blown, to the necessity of keeping their eyes open.

We may record the treatment pursued in France, which our author reports and recommends.

"Here the *local* treatment is the primary indication, and that by which alone we obtain a durable success. If it be ulcerations of the neck of the womb which have produced and keep up the disease, the cicatrisation of these ulcers is almost always followed by a notable diminution of the engorged tissues, and of the flux. *Cauterisation* is the remedy, *par excellence*, for these. This is performed generally once a week, with the nitrate of silver, or a solution of the nitrate acid of mercury."

"When the disease is very acute, the treatment is entirely antiphlogistic: bleedings from the arm, general baths, cold emollient injections, lavemens, and strict regimen. In other cases, the cauterisations *alone* generally suffice; and, often after a few repetitions of it, the pains of the loins, which were habitual, begin already to disappear—the discharge diminishes—the sleep, which had been troubled, becomes better—the appetite returns, and the disease points already to a favourable termination." 115.

We have usually more strings to our bow than we see here, and much may be done by great attention to the health, and by the medicines which correct secretions. But it is not our purpose to enter on such considerations.

"Where the discharge has its origin in an inflammation of the mucous membrane of the vagina, the solid cauterisation performed rapidly with the nitrate of silver, or astringent injections, with a pledget of charpie, imbibed in a concentrated solution of acetate of lead, renewed once or twice a day, and left applied to the neck of the womb, as practised by M. Ricord, is followed by invariable success.

When the discharge comes from the interior of the uterus, it is always glairy and transparent, like the white of egg; injections into the cavity of a solution of the acetate of lead, or of a very weak solution of the nitrate of silver, repeated every day, dries up in a short time the source of this very annoying infirmity." 116.

All is couleur de rose with our author. The speculum finds the disease —the caustic cures it. So may it be.

When the lining membrane of the uterus is the seat of "catarrhal inflammation," it becomes swollen and puffy—the organ is plugged up with thick and viscid mucus—sterility is the result—and serious organic alterations may be induced. For this M. Melier has proposed injections into the uterine cavity. After the cure of leucorrhœa, injections of cold water into the vagina should be habitually employed.

Ulcerations of the neck of the womb occupy the seventh chapter. Such ulcerations Dr. Balbirnie affirms to be the *most common of all* the affections of which the neck of the uterus is the seat. They may be so, but so far as

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our small experience with the speculum and without it has gone, they have not been so. Chronic inflammation of the cervix uteri has appeared to us to be infinitely more frequent.

The ulcerations may be superficial; or deep-eating ulcers, with hard and elevated edges; or a granulated surface like a blistered one; or the ulcer may have the form of a deep long fissure, seated on one or on both the lips of the os tincæ, and frequently running into the orifice of the uterus. The posterior lip of the os tincæ is the most frequent seat, and the orifice of the womb is almost always implicated in the ulcerations which are a little extensive.

The most common causes are contusions and lacerations of the os tincæ in difficult child-birth; the use of instruments to aid delivery; abortions; the wearing of pessaries; excess of venery; and the disproportionate size of the organs; causes, in short, that tend to keep up a chronic irritation and inflammation of the neck of the womb.

Our author adopts M. Lisfranc's classification of the ulcerations, with a very slight modification. It is the following.

1. The mere erythematous state of the os tincæ, with or without a phlictenular eruption.

2. Simple benign ulcerations.

3. Venereal ulcerations; *the true Hunterian chancre* seated on the neck of the womb.

4. Scrofulous ulcerations.

Lastly. Cancerous ulcerations.

1. In the simple erythematous state of the os tincæ, the redness is more or less extensive in surface, occupying either the whole of the os tincæ, or only circumscribed spots here and there; and it is generally accompanied with some engorgement and vascularity of the tissues. The mucous membrane is often thick and velvety to the feel, and sometimes bleeds with great facility.

There is frequently observed a multitude of small granulations, or minute miliary vesicles, distinct or confluent, which afterwards break, and become superficial ulcerations.

There may or may not be uneasiness with this state. When it results from acute gonorrhœa there usually is some.

2. Of the simple ulcerations we need say nothing. Their appearance may be readily imagined. They may occupy both lips of the os tincæ indifferently; most frequently, however, the posterior; or they may be seated on the edges of the orifice, and extend even into the cavity of the uterus, which is most commonly the case. If the mucous membrane be slightly swollen, inflamed, and œdematous, the ulceration appears deeper than it really is.

3. We will say nothing of venereal ulcerations of the cervix. We noticed three years ago a paper of M. Ricord's on this subject. We do not think that these ulcerations are by any means so common among the prostitutes in this country as that paper would lead us to suppose.

4. On scrofulous ulceration we must make the following extract.

"According to M. Lisfranc, the scrofulous ulcer is the consequence of the softening and opening of tubercles, and are preceded by a fluctuating tumour. Its opening is at first straight and fistulous—then it enlarges insensibly: the

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bottom of the kyste is of a pale, wan, grayish tint, with ragged and thin edges, giving issue to a matter of a disagreeable smell, but different from that of cancer. Frequently there co-exists an engorgement of the neck and body of the uterus. M. Lisfranc has met with about a dozen of these cases, in which the constitution of the patient, and the issue of the characteristic curdy matter (analogous to that of a suppurated cervical ganglion) left little doubt as to the diagnostic. The knotty feeling of the tumour renders its distinction from the scirrhous state often difficult. But the characteristic lancinating pains are wanting. The issue of the contents, and the facility and promptitude of the cicatrisation, evince sufficiently its true nature." 142.

5. The cancerous ulcerations are treated of in subsequent chapters. Our author communicates nothing with respect to them that merits particular attention.

We may dismiss the eighth, ninth, and tenth chapters without ceremony. They are appropriated to hypertrophy, chronic inflammation, and engorgement of the womb—cancer of the womb—and polypi and fibrous tumors of it. The chapters in question contain little that could be usefully noticed here.

The eleventh chapter is on the medical treatment of the organic diseases of the womb, and as it affords us a good insight into the practice adopted in France, we may feel some interest in glancing at its contents. The items of treatment are separately considered in the following order.

1. *Bleeding.* M. Lisfranc constantly employs this as a revulsive. His method is, during the intervals of each menstrual period, to prescribe two or three small revulsive bleedings from the arm, of three or four ounces only, whenever the uterine congestion and pains are intense: for eight days before and after this evacuation he abstains from bleeding, lest it should interfere with it. MM. Duparcque and Tealier practise it a few days before the occurrence of the catamenia, in order to moderate the congestion they entail upon the uterus.

2. *Application of Leeches to the Neck of the Uterus.* There appears to be some difference of opinion with respect to the utility of this measure. It would appear that if *revulsive* bleedings are good, *attractive* leechings could hardly be so. Yet Dr. Balbirnie assures us that he has seen the latter beneficial. "The proof of the pudding is in the eating." The mode of applying the leeches is as follows. The speculum is introduced, and the neck of the uterus being embraced in its extremity, the mucosities are wiped away by a brush of charpy, or by an injection of tepid water. The leeches are introduced into the tube, pushed forward to the os tincæ, and kept applied by a pledget of lint, which is removed as soon as they attach. The bites are hardly felt: in ten minutes the leeches gorge themselves, and fall off. A few injections of tepid water are again made, and the speculum withdrawn. The greatest number of leeches that may be applied is twelve: six or eight are the usual quantity. The bites soon cicatrise, and rarely or never give birth to troublesome ulcerations.

3. *Baths.* Hip-baths have been recommended and are employed, almost as a matter of course in diseases of the womb. A great absurdity, in our author's opinion, nay, the very greatest possible folly. He reasons thus.

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"For a headach, for example, we prescribe a foot-bath, to determine the blood towards the lower extremities; yet, for an affection of the pelvis, we do not fear to congestion the pelvis even! Is it not because they determine an afflux of blood towards the uterus, that practitioners prescribe them, when they wish to recal menstruation." Yet we may give the doctor a rap with his own cane. If hip-baths are so hurtful, because they draw the blood to the part, why should leeches, which do the same, be recommended by him? True, they deplete too, but do not warmth and moisture, which produce exhalation and secretion, deplete in some measure also? Has Dr. Balbirnie never seen fomentations, local hot-baths, applied to inflamed parts—to the surface affected with erysipelas, gout, or rheumatism—to the inflamed conjunctiva? By a parity of reasoning this should be absurd, yet it is found practically useful. The fact is, that hip-baths produce so much relaxation of the external parts and the vagina, that they unload the exhalent vessels. And, then, they are almost indispensable for cleanliness, in those organic diseases of the uterus, attended with offensive or profuse discharges. Dr. Balbirnie, however, affirms that the hip bath is in practice injurious, and he tells us that M. Lisfranc's method is to employ the general warm-bath, and to make the patient remain in it for at least two hours and a half, or three hours. This is to be repeated morning and evening on alternate days. Six hours a day in a warm bath is pretty well, and would be convenient enough in private practice.

4. *Rest* of body and of mind is obviously called for.

5. *Diet* need not detain us.

6. *Cauterisation*. This is extensively practised for ulcerations of the cervix.

"It is employed with two objects:—1. In the simple ulcers of the neck of the womb, on the principle laid down by Alibert in the case of cutaneous cancers—to the extent merely of altering the vitality of the tissues, and, by that means, hastening the cicatrisation. 2. In the cancerous ulcers, for the purpose of destroying the subjacent tissues, as well as repressing the excrescences. For the former, a gentle touching with the solid nitrate of silver, perhaps, answers best, and is constantly used with great success in the extensive practice of M. Ricord. M. Lisfranc, and others, prefer the nitrate acid of mercury, made by dissolving one part of the nitrate of mercury crystallised, in eight parts of nitric acid. This is diluted in twelve parts of water, and applied, by means of a fine brush of charpy, like a small camel-hair pencil—the speculum being previously introduced, the os tincæ embraced, and the mucosities wiped away; an injection of cold water is used by these practitioners before withdrawing the instrument. When the destruction of a cancerous ulcer, with large bleeding vegetations, is in question, the preference is given to the nitrate acid of mercury pure, as it penetrates and corrodes the tissues more profoundly. The extent and intensity of the cauterisation is always regulated by that of the ulcer. These cauterisations do not last two or three seconds at most, and are absolutely without pain in the immense majority of cases. By means of successive cauterisations, the whole of the neck of the uterus, and part of its body, may be destroyed, without danger or inconvenience to the patient; but, on the contrary, often prolonging her existence for several years. We have seen the cauterisation employed in some hundreds of cases, and there never has resulted the slightest accident worthy of note." 290.

We will not discuss the principle of treating cancerous ulcers or the cer-

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vix by caustics. We would only observe that, as they notoriously fail upon the surface of the body, they are not very likely to answer in the interior.

The cauterizations are generally renewed every eight days—after each, a bath is prescribed—and daily injections are employed in the interval. Of course the menstrual periods are avoided. For the simple ulcerations, M. Ricord always employs a pledget of charpy imbibed in a solution of the acetate of lead, or of the *vin aromatique* of the French codex, and applied by means of the speculum to the os tincæ, immediately after the cauterization. Other caustic and stimulating applications have at various times, and by various persons, been employed. They scarcely deserve mention. One of the latest is the chloruret of platinum, patronised by M. Recamier.

7. *Injections* are of constant use. The patient should be so placed, that the fluid may tend by its gravity towards the uterus. M. Ricord gives the preference to the permanent application of liquids imbibed in charpy, and introduced by means of the speculum, and allowed to remain applied to the os tincæ twelve or twenty-four hours, according to the abundance of the secretion.

On revulsives, narcotics, irrigations, lavements, compression, iodine, tartar-emetic, ergot of rye, acetate of ammonia, acetate of lead, hemlock, we may advantageously be silent.

Nor need we open the discussion on the propriety of amputating the neck of the uterus. Whether that operation may not be in some cases practised with advantage, is one question—whether it has or has not been grossly abused, is another. We entertain doubts on neither. And if any one thing is more certain than another, it is this—that in the first place it will not cure true cancer of the uterus—and, in the second, that cases have been publicly reported, of cancer cured by it, when either there was not cancer at all: or when, being cancer, the patient has been finally destroyed by it. What, for example, shall we say of such gross want of faith as is exhibited in the following anecdote, published by Dr. Krimer, of Aix-la-Chapelle, and copied by Dr. Balbirnie:—

"Madame de C., aged forty years, had all the vaginal part of the uterus in a carcinomatous state. A practitioner made the re-section of it, in the presence of a great number of spectators. At the end of fifteen days, he declared the patient cured, and presented her, as such to a medical society. Her improved state continued during two months; at the end of this period, a leucorrhea commenced, and became more and more abundant, and more and more fetid. The lady was sent to the Spa-waters, and there was seized with several abundant menorrhages. She removed to Aix-la-Chapelle, seven months after being operated on at Paris. The touch recognized ulcerated vegetations, half the size of the fist, upon the neck of the uterus. Three months afterwards, she died at Ostend; and, nevertheless, she figures among the Cases completely cured by amputation." 308.

Of such a character, our readers may be assured, are the majority of cases of cancer of the uterus cured. Either, in ninety-nine of the hundred, there was no cancer or no cure. Of such a character, too, has been, in most cases, the good faith of those who have purchased a little present hollow reputation, at the expense of treachery to the profession, and calculating inhumanity to patients.

It is not necessary to pronounce a formal opinion on the work from which

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we part. There is in it much enthusiasm, which, rightly directed, and restrained by sound judgment, would be equally advantageous to the author and the public. The former is not undeserving of encouragement, yet a friendly critic would desire that the present volume were cancelled, and another, pruned of its redundancies and indiscretions, substituted, in a few years, in its place. The author has done well in directing attention to the employment of the speculum, but his advocacy has been indiscriminating and importunate, and, attributing too much to his favourite instrument, he is likely rather to damage himself than to benefit it.

TRAITÉ SUR LES MALADIES DU FOIE. Par *A. Bonnet*. Paris, 1836.

"All inflammations of the liver are secondary to a gastro-enteritis." Such is one of the propositions formally announced, and much insisted upon, in Broussais' pathology; and of this, as of almost all the others, we may safely assert that it is partly true and partly false. It is but fair to state that the great medical reformer of the nineteenth century has not, perhaps, carried his own dogmas so far, nor urged them with such unqualified assurance, as some of his followers have done, and are apt to do in the present day. With them, there appears to be scarcely any other abdominal disease but "gastro-enterite"—either as the primary affection, or as the all-important complication. Dyspepsia, according to their creed, is a gastro-enterite—so are gastrodynia and colic; jaundice and cholera are the same; every form of diarrhœa is invariably, we are told, dependent upon some inflammatory affection of the stomach and bowels; and the whole catalogue of various and varied fevers is forced to acknowledge the same genealogy. That Broussais has introduced some very important changes in the theory and in the practice of physic, that he has simplified our views of the true nature of many diseases, which before his time were ill understood and badly managed, that he has given greater precision to our principles of diagnosis, and that he has thereby inspired us with a more enlightened and a more secure confidence in our therapeutic arrangements, we are most willing and happy to confess. His is a great and a venerable name; and all who have traced the progress of the healing art since the beginning of the present century, will readily acknowledge that he has done more to its advancement than any other one of his cotemporaries. To justify in some degree his title to this distinguished praise, let us briefly consider the very topic with which we commenced these remarks—the connexion of hepatic inflammation with gastro-enteric disease. We have already expressed our dissent from the universal and unqualified admission of this doctrine; but that it is partially, nay, even very frequently true, we are bound to believe, from the results of an extensive and varied experience.

Numerous and most complicated are, it is well known, the sympathies which the intestinal tube holds with almost every part of the frame. A blow on the region of the stomach will double up the body, and bring on a state

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of almost fatal powerlessness and exhaustion; a mouthful or two of nauseous or oppressive food will change, in the course of a few minutes, the energy of vigorous and cheerful health into the puling discontent of a most uneasy restlessness. Think, then, of the miserable feelings of sea-sickness;—the utter prostration and helplessness, the total abandonment of spirit, the palsy of all the faculties, the swimming head, the sightless eyes, the tottering limbs: whence are all these, but from the universal sympathy with the vexed stomach? In short, nutrition being the fundamental function or process of life, and the intestinal canal being the laboratory where this process is effected, we are at once prepared to expect and rationally to account for the "*consensus* à pede usque ad calcem" of every part with the great centre of organic life. There was therefore not only much political shrewdness, but not a little physiological acumen also, in the Roman Senator's speech, when he appeased the discontented citizens, by telling them the fable of the mutiny of body's members against the seemingly indolent stomach:

> "There was a time, when all the body's members
> Rebelled against the belly; thus accused it—
> That only like a gulf, it did remain
> I' th' midst of the body, idle and inactive,
> Still cupboarding the viand, never bearing
> Like labour with the rest:
> The belly answered;
> True I receive the general food at first
> Which you do live upon; and fit it is,
> Because I am the storehouse and the shop
> Of the whole body. But if you do remember,
> I send it through the rivers of your blood,
> Even to the court, the heart; to th' seat o' the brain;
> And, through the cranks and offices of man,
> The strongest nerves and small inferior veins
> From me receive that natural competency,
> Whereby they live."

In these words of our marvellous dramatist, we have an admirable physiological description of the intimate and necessary dependence of every part of the body on the state of the stomach. "The kingly-crowned head," "the vigilant eye," "the counsellor heart," "the arm our soldier," "our steed the leg," and "the tongue our trumpeter"—all must acknowledge the control of "the cormorant belly."

Need we wonder then, when we consider how all-powerful is the influence of the digestive organs not only on our physical, but also on our intellectual and moral capacities, that the ancients placed the seat of some of the passions, as anger, jealousy and melancholy, in the abdominal viscera.

But well known as all these considerations had been for many centuries, physicians seemed not to have suspected the extent of that influence which diseased states of the stomach and intestines may have on the features and progress of other maladies; and it was not until the publication of Broussais' Examen and Commentaires that the full importance of studying these relations was satisfactorily established. Dessault in France, and Dr. Hamilton and Mr. Abernethy in this country, contributed most essentially in preparing the way to the introduction of more correct etiological doctrines and of more judicious and successful therapeutic precepts. Indeed it is more

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than probable, that the attention of Broussais was especially directed to the investigation of the post-mortem appearances in the primæ viæ, from the beneficial changes which had been recently effected in the treatment of many diseases by these, his eminent predecessors, having so convincingly shewn that numerous forms of disease, external as well as internal, surgical as well as medical, are, if not actually caused, at least greatly modified and exasperated by a disordered condition of the stomach and bowels, and that more good may be derived from a regulated course of aperient medicines, than from the use of all the other members of the pharmaceutical catalogue.

This doctrine and this practice may have been pushed too far, and we really do believe that not a little empiricism has crept into British physic since Dr. Hamilton has published his excellent work on Purgatives. One of the errors, thus extensively propagated, is to be traced to the very general belief, that the almost constant disorder of the alimentary canal consisted merely in an accumulation of unhealthy bile and feculent matters, and that, therefore, the great therapeutic indication was to remove and expel these. Broussais has most satisfactorily shewn the fallacy and danger of such a doctrine in a numerous set of cases. He has proved that the train of symptoms so accurately described by Hamilton and Abernethy is often owing to a subacute inflammation of the mucous membrane of the alimentary tube, that the use of strong purgatives in these circumstances is injurious, and that a cure is to be effected by leeches, blisters, demulcents, and so forth.

These preliminary remarks may be useful to the reader before we call his attention to the contents of the book under review.

M. Bonnet is an ardent disciple of Broussais, and the critical reader may detect in almost every page of his work the tenets of the physiological school peering out. He starts with making the unqualified assertion, that every case of hepatitis is accompanied by inflammation of the peritoneal covering of the liver, and of the mucous surface of the stomach and duodenum. Even in those cases in which the liver becomes inflamed from penetrating wounds or from contusions, we are assured by him that the disease is always propagated not only to its peritoneal covering, but also to the alimentary canal; and, strange to say, he appeals to some cases, which in our opinion are rather favourable to the opposite side of the question. For example, the first case recorded was that of an officer who was wounded in fencing, by a sharp-pointed foil entering for several inches in the right hypochondriac region. Acute hepatitis came on; suppuration succeeded, and he died on the 12th day after the accident. The liver was found on dissection to be much enlarged and of a deep red colour. An abscess occupied the right lobe. "L'estomac et le duodenum etaient rouges également." Such were the only inflammatory appearances in the stomach and intestines, in a case which our prejudiced author holds up as "perfectly conclusive" of his doctrine! But the next case is even more unsatisfactory; it is taken from Portal's treatise on "Maladies du Foie." A man died on the eleventh day after an attack of most acute hepatitis, which had terminated in suppuration. The appearances discovered in the liver itself are minutely described; and all that we learn of the state of the alimentary tube is in these words: "la cavité de l'estomac etait un peu retrecie, et la partie qui etait unie au foie par les ad-

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berences des pseudo-ligaments parassait atteinte d'une legére inflammation, surtout dans la face interne."

So determined is M. Bonnet in maintaining his position, that he even calls in question the accuracy of those authors who have reported any cases of fatal hepatitis, in which no distinct traces of lesion were discoverable in the stomach and bowels. He rejects, for example, one or two such cases of M. Andral, and with no lack of presumption tells us that M. Andral must be mistaken; for the very existence of certain symptoms during the lives of the patients, as recorded in the reports, indicates an "irritation du tube alimentaire." Now before adducing other cases to shew the fallacy of M. Bonnet's assertions, we beg our readers' attention for a few minutes to this expression—"irritation du tube alimentaire." That this irritation, according to M. Bonnet himself, implies nothing more nor less than the presence of the usual symptoms of disordered stomach and bowels, such as nausea, anorexia, furred tongue, disagreeable taste in the mouth, tendency to vomiting, and irregularity of the alvine evacuations, is apparent from his own work; for in one part of it he alludes to the distinction between mere irritation and actual inflammation of the gastro-duodenal surface. Is it fair, therefore, or philosophical to ground his disbelief in the accuracy of M. Andral's cases on such flimsy quibbling? It is very evident that, in his indiscreet zeal for the doctrine which he advocates, he has had recourse to mere ambiguity of expression to bolster up its weak points.

No one ever dreamed of denying that the functions of the chylopoietic viscera are almost invariably, nay almost necessarily, disordered—or, if Bonnet prefers the language, that the gastro-enteric mucous surface is in a state of irritation—in diseases of the liver. It cannot in truth be otherwise; for all these organs are so intimately associated in the performance of a common process, that one of them cannot suffer, without involving more or less all the others. This most important law should never be lost sight of in investigating the nature, causes, and treatment of abdominal diseases; and we have already awarded to M. Broussais the praise of having illustrated its truth with great ability and success. What we find fault with in him and in his followers is, that they recognize only one form of complication in all cases of hepatitis—that form being, as a matter of course, gastro-enterite.

To justify our dissent from this doctrine, we may confidently appeal to the observation of every experienced physician; and were we in want of other data, reference might be made to a table of 25 cases of liver disease, which Dr. Stokes has inserted in the Cyclopædia of Practical Medicine, art., *Inflammation of the Liver*, with the view of illustrating this very topic. In one half of these cases, drawn partly from the practice of MM. Andral and Louis, and partly from his own, no traces of gastro-enteritis were to be found on dissection.

The circumstance, however, of this complication being present in the other half of the cases deserves to be noticed, as some valuable considerations are thence deducible, to regulate our conduct in a therapeutic point of view. The practice of immediately resorting to the use of acrid purgatives in liver disorders, without the state of the gastro-intestinal tube having been previously well investigated—a practice which has been especially prevalent among British physicians—is certainly very injudicious. The already inflamed mucous surface is thus exposed to the action of stimulants applied di-

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rectly to it; the feverish symptoms are necessarily aggravated; the liver sympathises, and any diseased action, which is already established there, is increased.

Numerous are the cases, which twenty years ago would have been designated under the vague and very comprehensive term "bilious affection," and treated with active purgatives, not to mention a course of mercurials, but of which the true nature and primary cause is now ascertained to be a subacute inflammation of the upper portion of the intestinal tube, and which may be speedily relieved by a much milder and much safer practice. If Broussais had done nothing more for pathology than merely corrected the pernicious notions which were entertained of the nature of such cases as we have now alluded to, he would have deserved well of the medical profession.

We have said enough, we believe, on the frequency of gastro-enteritis being complicated with hepatitis and other lesions of the liver; and shall now shortly allude to the other position which M. Bonnet maintains—that inflammation of the parenchyma of the liver is almost always accompanied with inflammation of its peritoneal covering. It is rather strange that he has advanced this doctrine in so unqualified a manner as he has done, without being ready to support it by the testimony of numerous facts. Most unfortunately for M. B. the very contrary of his proposition appears to be nearer the truth: we strongly suspect that he is but indifferently well acquainted with the researches of one of the best modern pathologists. It is rare to meet with a French author who is at all conversant with English medical literature; but we might certainly have expected that he was so with the writings of his own countrymen. Now both Andral and Louis, the two great authorities on pathological subjects, have alluded to the rarity of hepatic peritonitis, compared at least with inflammation of other serous membranes, as the pleura. Morbid adhesions of the liver are by no means very frequently found on dissection; and often is that viscus itself altered, nay, even seriously disorganized, and yet we discover little change in its investing membrane. Mr. Annesley, in his recent very valuable work on the Diseases of India, thus expresses his opinions on this subject:—"We frequently observe in India the internal structure of the liver inflamed to the greatest possible extent, without any effusion of lymph from its surfaces, and the inflammation may go on to the production of several abscesses in both its lobes, or of one very large abscess in the right lobe only, without any decided marks of inflammation of the envelope of the organ, except some alterations of colour merely, which are usually occasioned by the state of the parts immediately underneath; nay, even abscesses of the liver may proceed to the utmost extent, and ultimately break into the abdominal cavity, without having induced inflammation of the serous surface where they point, and consequently without forming adhesions to the parts with which they are in immediate and close contact."

So much for the pathological information in M. Bonnet's work.

The description which he gives of the symptoms of hepatitis, acute and chronic, is tolerably good. En passant, we may remark that the alleged pain in the right shoulder, which used to be always enumerated as one of the most constant symptoms of diseased liver, is often quite absent, and the practitioner, therefore, is to be cautioned not to allow his diagnosis to be much influenced by this consideration.

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The examination of the abdomen ought never, as a matter of course, to be omitted. When the abdominal parietes are thin, and the liver is at the same time considerably increased in volume, we find no difficulty in tracing its edge; but if the patient be fat, and the chest very capacious, it requires the greatest nicety of examination to obtain any satisfactory knowledge in this way. The tumefaction may be as great in the epigastrium, and even in the left hypochondrium, as in the right hypochondriac region; and the patient may experience as much uneasiness or pain, when we press on one of these parts, as on the other. If the disease be confined chiefly to the left lobe of the viscus, the right hypochondrium is occasionally quite free from any fulness, while the epigastrium and left hypochondrium only are distended and painful. Under these circumstances, the case may be mistaken for some tumor of the stomach, or even for disease of the spleen. Every experienced physician must have occasionally met with such cases. The liver attains sometimes such an enormous bulk—weighing 15, 20, 30 pounds and upwards—that it has been known not only to occupy the epigastric and two hypochondriac regions, but also to extend to, and even below, the umbilicus, reaching to the edge of the right os ilii.

Such cases are usually met with in hard-drinkers, or in patients who have suffered long and severely from attacks of intermittent fever. We need scarcely say, that it is almost next to impossible to form a very accurate diagnosis under these circumstances, unless the patient has been seen repeatedly during the progress of the enlargement. But in the less advanced form of the disease, the enlightened physician may generally succeed, although even then it often requires the nicest discrimination to do so. An hepatic tumor situated in the epigastric region may in general be distinguished from any tumor of the stomach itself, by its being more diffused and more moveable, and by its edge being more distinctly felt in the left than on the right side, where it almost always may be traced extending upwards under the cartilages of the ribs, and where therefore it is quite impossible to ascertain its boundaries. We need not allude at present to the assistance to be derived from the history of the case, and from the symptoms which particularly denote stomachic, and those which indicate hepatic derangement.

As to hepatic tumors simulating those of the spleen, we must remember, however improbable the statement may at first sight seem, that cases have occurred where the best physicians have erred in their diagnosis. In both, there is the same general diffused fulness of the side, the same dull pain, the same inability to lie on a particular side, the same predisposing and exciting causes, the same tendency to dropsical effusion into the abdomen, and so forth. Tumors however of the spleen are observed to be usually inclined from the left to the right side, and obliquely from below upwards, whereas the direction of those of the left lobe of the liver is more horizontal from the epigastrium towards the left hypochondrium. Icteric symptoms, too, are much less frequent in the one case than in the other.

In the preceding remarks, we have supposed that one or more lobes of the liver are enlarged in size, and that their misplacement has been caused by this enlargement. But it deserves to be noticed that this viscus may be felt not only in the epigastric, but also in the umbilical and left hypochondriac regions, although it has undergone no change in bulk. This may happen, when there is a copious effusion in the right cavity of the pleura; the

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diaphragm is thus forced down and the liver is made to protrude much lower than in health. M. Andral mentions a case in which a large encysted tumor had formed between the right kidney and the liver, and in which the latter viscus was fairly protruded into the left hypochondrium. The possibility of such sources of error should be known to every physician.

It occasionally happens that the gall-bladder is protruded so much downwards and outwards, that it forms a very distinct tumor at some part of the abdominal surface. Andral states that he has seen it either immediately below the cartilages of the right ribs, or lower down in the hypochondrium, or in the right iliac fossa, or lastly in the epigastrium. We can readily suppose that a tumor caused by the protrusion of the gall-bladder may be mistaken for an abscess, either of the liver itself or of the abdominal parietes. In the 1st vol. of the Dublin Hospital Reports, Mr. Todd has recorded a very curious case, where he committed this mistake, punctured the swelling, and the patient died of peritonitis on the following day. The facts are these. A young girl, after repeated attacks of fever, had been seized with excruciating pain in the abdomen, jaundice, &c. She was almost insensible when Mr. Todd first saw her. The epigastric and right hypochondriac regions were occupied with a tense swelling, at the most prominent point of which a sense of fluctuation was distinctly perceptible. A puncture being made, a thin fluid coloured with green bile flowed out; and when a canula was introduced into the wound, upwards of two quarts of a viscid bile were discharged. On dissection, the peritoneum was found inflamed and containing a quantity of serous and bilious fluid; the liver was quite healthy, the gall-bladder empty, but the hepatic and common ducts were so enormously distended, that they formed a sac in which there was still more than a quart of bile!

What adds greatly to the occasional difficulty of a correct diagnosis in hepatic disease, is the circumstance of its sometimes continuing for a length of time, and inducing the most extensive and most serious lesions of structure, without being indicated by any very prominent symptoms during life. Often is the liver found to be enlarged, hardened, tuberculated, or even to be in a state of suppuration, and yet the patient may not have once complained of pain or uneasiness in the side; the functions of the bowels may have been uniformly regular, and the skin have always been quite free from jaundiced colour. It certainly does appear very strange that the tissue of the liver may be seriously affected with diseased changes, while its secretion, the bile, may be little, if at all, changed from the healthy standard. But so it is: every pathologist knows the fact, and every work in general pathology records numerous instances to prove its truth. Andral mentions a case, where he found on dissection numerous abscesses, with redness and softening of the hepatic tissue around them, yet the patient never had pain in the region of the liver, nor had there ever been one sign of jaundice: he had died of acute pneumonia and gastritis. In another case, M. A. discovered an hepatic abscess associated with gangrene of the surrounding tissue, although there had been no symptom of liver-disease during life. But it is unnecessary to multiply examples. The great lesson to be drawn from all these considerations is the necessity of caution, we had almost said of *humility*, in judging of the nature and consequence of any disease, however inconsiderable it may seem to our imperfect faculties.

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Those hasty men, who talk of physic as if it was one of the exact sciences, who profess to gauge and to measure diseases by the line and by the plummet of unerring description, and who make a boast of being able to propound certain "formulas," which will infallibly direct the practitioner in the cure of these, are little to be trusted. Very different is the conduct of the enlightened observer of Nature. Though quick in detecting disease, candid in expressing his opinion of its nature and its seat, and decided in his plans of treatment, he always avoids dogmatism of judgment, and rashness of action in his practice; knowing well that far more mischief is done by the over-officiousness, than by the cautious reserve of medical men. One of the most important, and certainly one of the most difficultly-acquired lessons in the healing art, is to know when to "do nothing." This is the secret of the "Médécine expectante" of some of the French physicians; and also of the foolish quackery, known in the present day under the title of homœopathism.* We cannot illustrate the value of these remarks better than by extracting the following most instructive remarks from Andral's Précis d'Anatomie Pathologique, on the extreme uncertainty of forming an accurate diagnosis of diseases of the liver.

"There is scarcely one of the alterations, to which the liver is subject, which has not been designated by the name of hepatitis. In my opinion, there is hardly one of them which may not be the result of an irritation, whose first effect was to induce an hyperæmia of the liver. On the other hand, I do not know an alteration of secretion, or of nutrition of the liver, not even a collection of pus in its parenchyma, that can be considered as necessarily arising from a previous state of irritation. I do not know one of which we can say, that its formation has been *necessarily* preceded by a hyperæmia."

The remaining page or two we shall devote to the consideration of one of the occasional effects of diseased liver—jaundice. There are some points in the history of this disease, which it is not easy to explain, and even in the present day, it will be found difficult in numerous instances to say, on what particular morbid state of the biliary apparatus it depends.

The symptoms and phenomena of the disease are occasionally variable and inconstant. In some rare cases, the yellow discoloration affects almost all the internal parts of the body, while the skin is nearly quite exempt from it. M. Ferrus mentions the case of a woman who died at the Salpetrière:—"Most of the solid parts of the body, with the exception of the skin, were found stained of a deep icteric dye; the subarachnoid tissue, and the adipose substance, in almost every part, were infiltrated with a saffron-coloured serosity. The liver was large and gorged with blood, but there was no obstacle to the passage of the bile from the gall-bladder into the bowels, as the gentlest pressure on the former caused the bile to flow freely along the common duct." Among other occasional anomalies of jaundice, we may mention that the discoloration of the surface may be limited to certain parts of the

* The exhibitions of some of our confrères in this metropolis, in reference to the absurdities of Hahneman's reveries, have of late been truly amusing. The "would-be," but "afraid-to-be" advocates of this nonsense most solemnly protest against being dubbed as homœopathists! Well may it be said of them—"they run with the hare and hold with the hounds." We fear that even the *innocent* hares will disown their most timid companions.—*Rev.*

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body; as to the face, the chest, and even to one lateral half of the body. It is not easy to explain the occurrence of these irregularities; and indeed we cannot be much surprized at this, when we remember that the etiology of jaundice is very imperfectly understood. Hitherto it has been too customary to attribute every case of this malady either to disease of the liver, (which is then supposed to secrete an unhealthy bile, or a deficient quantity of it), or to an obstruction to the free passage of the bile from the gall-bladder into the duodenum, in consequence of gall-stones, the pressure of the adjoining viscera, spasm of the ducts, and so forth.

Now it is quite true that jaundice may, and that it does frequently arise in one or other of these manners; but it is equally true that, in some cases, the unprejudiced pathologist is puzzled to give a rational interpretation of its occurrence. We have already stated that jaundice is by no means an invariable concomitant of inflammation or other diseases of the liver. The skin indeed may assume a dull, yellowish, muddy hue; but this is very different from the saffron staining of genuine jaundice; and, on the other hand, every practical physician knows that the colour of the alvine evacuations is most irregular in this disease. Our author is quite correct, when he remarks: "les auteurs pretendent que dans l'ictère les dejections alvines sont pour l'ordinaire decolorées, grisatres, presque blanches; mais je crois pouvoir assurer qu'il est beaucoup plus commun qu'on ne pense de les voir conserver leur couleur naturelle." By attending to these circumstances, we are led to perceive how fallacious must be the doctrine, formerly prevalent, which referred every case of jaundice to an obstructed flow of bile from the gall-bladder into the intestines.

One of the most puzzling problems in the history of jaundice is, to account for its being caused by certain violent emotions of the mind, more especially by anger and deep grief, and also by severe bodily pain. It is not uncommon to find jaundice supervene on severe surgical operations, gunshot wounds, and strangulated hernia; and numerous examples of its occurring after fits of passion, of sudden alarm, and of overpowering affliction, are recorded by Morgagni, Lallemand, and Portal. Criminals, when sentence of condemnation has been passed upom them, have been known to become suddenly jaundiced. In all these cases, the disease has been regarded as purely nervous, and to be caused by a spasmodic affection of the gall-bladder or of its ducts. M. Bonnet is unwilling to admit this interpretation, and, ever pleased to mount his hobby-horse, he prefers to solve (?) the difficulty in the following way:—"Les accidens generaux qui accompagnent les grandes operations de chirurgie, les plaies d'armes-à-feu, &c. debutent toujours par la tube alimentaire, et l'on peut sans crainte avancer que l'irritation du parenchyme hepatique n'est jamais alors que consecutive à celle des voies digestives. C'est aussi par l'intermediaire d'une irritation gastro-intestinale que les vives affections de l'ame, les passions tristes ou gaies, determinent l'ictère." In this roundabout way, our author endeavours to explain the occurrence of jaundice-symptoms after injuries of the head, during pregnancy, and also in infants during the first week after birth. It is much more probable that the liver is directly and primarily affected in some of the cases alluded to above—upon sudden and violent emotions of the mind, severe and protracted bodily pain, injuries of the head, &c.—than that the hepatic affection is secondary and consecutive upon a gastro-intestinal irritation. There seems to be no necessity for this additional link in the dis-

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eased action, and we therefore think that it is wiser and better to affirm simply, with M. Andral, "que le cerveau re-agit directement en quelques circonstances sur le plexus hepatique."

But in saying this, we are very far from denying the frequent connexion of jaundice with a subacute inflammation of the bowels, more especially of the duodenum. In truth, this complication is much more common than has been generally supposed, at least in this country. If the patient feels pain or uneasiness on pressure of the epigastrium, if he is thirsty and feverish, if the tongue be dry, and red at the edges, if the skin be dry and harsh to the feel, and, above all, if there is a marked depression of the strength and powers of the system, then has the physician reason to suspect, that the case is not one of merely obstructed flow of the bile, but rather that the jaundice is only one symptom of a gastro-enteric inflammation.

The sympathy between the diseased mucous membrane and the liver and gall-bladder is quite sufficient to induce a most complete jaundice, although there may be no mechanical obstruction of the ducts, and the alvine evacuations have, during the life of the patient, exhibited no apparent deficiency of bilious admixture. The jaundice which sometimes follows the drinking of cold fluids, or the exposure to cold weather when the body is heated, and that also which is consequent upon a debauch in the luxuries of the table, is very generally associated with an inflamed state of the gastro-duodenal surface. But a form of the disease, which is more common than either of these now mentioned, and more important, too, from its being very obscure and very dangerous, is the jaundice which is associated with and constitutes an essential feature of certain fevers. Such are the bilious fevers of hot climates, and such, also, are some epidemics which we occasionally meet with in this country.

In these pyrexiæ, there can be little doubt that the gastro-enterite precedes the coming on of the hepatic symptoms. We are the more anxious to direct, in an especial manner, the attention of our readers to this circumstance, because, if the assertion be true, the indiscriminate use of active acrid purgatives in fever—a practice very prevalent among British physicians—ought to be reprobated.

Our limits prevent us from examining this important subject at greater length. What we have chiefly aimed at, in the preceding pages, is to establish the following propositions—that the diseases of the liver, in order to be rightly understood, must be studied not apart and by themselves, but in connexion with diseases of other parts of the body—that some are primary and idiopathic, such as those which occur in tropical climates, after intermittent fevers, after injuries of the right hypochondrium and even of distant parts, as of the head; and to these we may add the morbid affections which follow upon violent mental emotions, and protracted bodily suffering—that many are secondary, and are symptomatic of, or at least are complicated with, a subacute inflammation of the mucous membrane of the stomach and duodenum—that diseases of the liver may exist long, and may induce extensive alteration in the hepatic tissue, without being attended by any characteristic symptoms during the life of the patient—that the tissue of the liver may be seriously diseased, and yet the bile may be secreted normally in point of quality and properties—that therefore jaundice is not a necessary symptom or accompaniment of morbid liver—that this disease, jaundice, often occurs, when the gall-bladder is found after death to be full of healthy

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bile, and there is no mechanical obstruction to the flow of this fluid from the gall-bladder into the intestines—and lastly, that many cases of jaundice, especially that form of it which occurs in bilious fevers, depend upon an inflammation of the gastro-duodenal surface.

The attentive consideration of these propositions leads to some important practical conclusions. It shews us the impropriety of grouping together a multitude of cases, which may have only a few symptoms in common, under one general denomination of diseases of the liver, bilious affections—an error which has been much more common among British than among continental pathologists—without regard to their history, their causes, symptoms and complications. We have neither space nor leisure to discuss the treatment of these various and varied diseases. Moreover the labour would be quite unnecessary; for in general it is not difficult to apply the appropriate remedies, when we have once formed an accurate diagnosis of a case. There are, however, one or two topics to which we shall very briefly allude. Every one knows that mercury, in some form or another, has been long deemed the grand specific in diseases of the liver. That this metal unquestionably possesses wonderful effects in checking the progress of acute hepatitis cannot be denied by any physician. All tropical writers agree on this score, and the almost universal belief is, that if salivation can be once established in a case, the inflammatory process is almost instantly arrested. It is a curious fact in the history of therapeutics, that this most potent subduer of inflammation, mercury, should have been in common use against one or two of the phlegmasiæ—hepatitis and iritis—for a great length of time, before it was tried in other diseases of the same class. It has been only of late years that the great efficacy of long and repeated doses of calomel, in inflammations of the serous and fibrous tissues, in rheumatism, &c. has been fairly established. The error is to be explained thus.

It was long believed that mercury had some *peculiar* and specific influence on the liver; and this doctrine may be, to a certain extent, quite correct. But that its efficacy in cases of hepatitis is to be accounted for just in the same manner as its equal efficacy in many other inflammations—by inducing perhaps an opposing and counter-acting action in the capillary vessels, an action which is incompatible with the inflammatory one*—will not, we suppose, be denied by any one in the present day.

It is an unfavourable symptom in inflammatory and febrile diseases, when the system resists the mercurial action. This circumstance, therefore, taken in connexion with other symptoms, such as abatement of the pain, shiverings, &c., may suggest to the practitioner some conjecture of the changes that are about to take place. Mr. Annesley remarks, "that there can be no doubt that the system will not be brought under the full operation of mercury, or that ptyalism will not follow on the most energetic employment of this substance, when abscess exists, although a slight tenderness of the gums will be produced by it."

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* The study of the modus operandi of mercury in arresting inflammatory disease may possibly throw some light on the state of the capillaries in an inflamed part—the proximate cause of inflammation. The little knowledge that we have of this subject tends rather to favour the doctrine of Vacca, that there is a stasis, or stagnation of the blood in the extreme vessels.—*Rev.*

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In the more chronic affections of the liver, some one of the preparations of mercury is very generally exhibited in conjunction with other medicines, in the view of promoting the flow of the bile. The practice is perfectly safe and proper in some cases; but the indiscriminate use of this mineral is certainly to be deprecated. It is even doubtful, whether mercury is more decidedly a cholagogue than many others of the class of purgatives. The alkalis, more especially the subcarbonas and the liquor potassæ in union with the decoct. aloes compos. of our Pharmacopœia, or with some of the preparations of colchicum, will be found admirable remedies. If the flow of the urine be solicited, at the same time that the action of the bowels is stimulated, the relief to the patient will be more decided. The sal. polychrestus of the older pharmaceutists, the sulphas. potassæ of our pharmacopœia, and the Rochelle salts, the tartras sodæ, in combination with a few grains of jalap, or of rhubarb, are most useful for this purpose. We need not again urge on our readers' attention the importance of ascertaining in all cases, whether there be any irritation, or inflammatory action of the gastro-enteric surface. When we have reason to suspect the presence of such a complication, the repeated application first of leeches, and then of rubefacients or blisters to the epigastrium, the internal use of refrigerants, such as small doses of nitre, of borax, and the sucking of pieces of ice, the employment of enemata, and then of the mildest aperients, such as castor oil, by the mouth, along with a most rigid "diete," will in almost every case remove the insidious enemy. The use of the nitro-muriatic baths has, of late years, been perhaps rather too much neglected in the treatment of chronic diseases of the liver.

Here we must stop. We have hitherto given no opinion of the merits of M. Bonnet's work. It obtained the gold medal from the Societé Medicale d'Emulation of Paris. Like most prize essays, it is of very mediocre merit.

The Fallacy of the Art of Physic, as taught in the Schools:—with the Development of new and important Principles of Practice. By *Samuel Dickson*, M.D. Ed. 1836.

This volume ought to have been headed—Hahnemania antiquata; or Pyrexiamania triumphalis. Homœopathy and every other pathy may now hide their heads, for a new system is let loose upon the world which is to eclipse all that preceded it! Hitherto we have been accustomed to deplore the many ills to which flesh is heir. But we were all in error. There is but *one* malady on earth—but, like Goldsmith's fault—it is a "thumper!" "In the sequel we mean to shew that, instead of many maladies, man, *properly speaking*, is the victim only of one." This one disease is fever—not fever in the large sense of the word, but only remittent fever! The process of reasoning by which Dr. Dickson appears to have arrived at this conclusion, is equally short and singular. He considers disease to be simply "an increase or diminution of the proper functions of health"—and as fever answers to this definition—*ergo*, all diseases are remittent fevers! The author of this theory seems to forget that two people

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may play at the same game. As hydrophobia must be considered as presenting an aberration from health—or to use Dr. D.'s language—an increase or diminution of healthy function—so it might be inferred that all diseases were neither more nor less than hydrophobia! But a part of Dr. D.'s definition of disease is rather curious—an *increase* of healthy function! Thus a man who is rapidly convalescing from typhus fever, and consequently *increasing* in healthy function, must be daily plunging deeper and deeper into disease, according to the definition in question. Indeed we have not, for many years, met with so amusing a book on medicine as the present. Dr. D. has an original way of doing every thing. Thus he expresses the greatest respect and even gratitude to Sir James M'Grigor, the head of the army medical department—as his patron and friend. Now it is well known that Sir James has long impressed upon the army medical officers, the utility—the necessity of cultivating morbid anatomy, and also the employment of the stethoscope. Listen to Dr. Dickson. "That bauble of Laennec—the stethoscope—which the reader (and Sir James) will pardon me for holding in heterodox contempt, is, of course, employed. The very application of the instrument to the chest *deranges the action of the lungs (!!!)* and heart."—16.

After such a passage, demonstrative of such profound ignorance and inveterate prejudice, the reader would probably excuse any farther notice of the work; nor will we trouble him with much more of it. Morbid anatomy, so strenuously urged on the attention of the army medical officers, is quite as much despised by our author as the "bauble of Laennec." The following is a specimen of logic to prove that all diseases are remittent fever, because they all shew *increase of temperature* at one time or other.

"There can be no abnormal action, no local lesion, no change of structure unpreceded by change of temperature. You occasionally, it is true, meet with patients who, from their minds being exclusively wrapt up in the local prominent feature for which they consult you, will deny this with hardihood; but a cross-examination in most instances brings them to stultify their previous denial. In rare cases—cases where the memory is defective, or where the patient is so self-sufficient as to pretend to instruct you—you will fail even in this. It is not, however, the less true on that account.

Take the subject of pulmonary consumption. He labours under mental inquietude, which his position so often places beyond his control; or he has been subjected to a bad atmosphere, or exposed to a draught or to the cold night air. In either case he shivers, fevers; or his feet or hands become by turns colder and hotter than natural; perhaps he sweats; then come the cough, the expectoration, both gradually developed by successive returns of the universal disturbance. Mark the patient well. There are days, nay times of the day, when his cough and expectoration diminish, when his constitution is little if at all disturbed. Bodily and mentally he tells you he is better, and there is an amendment; but another day, and the morbid phenomena recur; the remissions are less and less marked; emaciation is more and more perceptible; the night-sweats become troublesome and frequent; and death, under the routine aggravation of leeches, blisters, and palliatives, sooner or later closes the scene. Is not this the history of *every disorder* where the physician fails to make an impression with the resources of his art? Setting aside the mere expectoration, do you not occasionally witness the whole of the above train of symptoms, the cough, the fever, the wasting, the night-sweats, where after death you cannot detect the slightest structural change in the lungs? What then do you term the disorder? Is it not equally consumption, or rather do not both resolve them-

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selves into cases of *remittent fever*, the one differing from the other simply in the *development of local lesion?*" 18.

Gout he maintains to be a "remittent fever," on the authority of Sydenham, who tells us that the pain remits in about 24 hours from the beginning of the attack! "Cancer, lumbar, hepatic, and other abscesses, auricular, vaginal, and other discharges, the scrofulous, and rheumatic joint, diseased kidney and bladder, and every variety of eruption, ulcer, and humour, including *aneurism*," &c. are all remittent fevers!

If this be madness, "there is method in it"—witness the following passage:—

"If multiplicity of patients be at all a test of successful treatment, the profession may draw a favourable inference from the fact, that in a less period than three years, I have prescribed for upwards of *eight thousand* private patients,—depletion in no instance forming a part of the treatment." 53.

What! no *depletion* of your patient's purses? Dr. Dickson scorns to do things like other people. He disdains to beat about the bush, but launches out into as considerable a "puff direct," as we have ever witnessed in any medical work not the offspring of a professed charlatan!

We have only to add, in conclusion, that such works as these, including Hahnemania, do incalculable injury to the profession by impressing on the minds of the public that we have no steady principles to guide us, but are blown about by every gale, and thrown into sects and parties by every new doctrine, however absurd. It is, perhaps, fortunate that this last absurdity will have a very limited circulation—namely, that it will be confined almost exclusively to the author's own private patients, gratuitously distributed. Still, when we consider that these amount to about *three thousand* per annum, the mischief will be considerable.

HOMŒOPATHY.

I. A PRACTICAL VIEW OF HOMŒOPATHY; BEING AN ADDRESS TO BRITISH PRACTITIONERS ON THE GENERAL APPLICABILITY AND SUPERIOR EFFICACY OF THE HOMŒOPATHIC METHOD IN THE TREATMENT OF DISEASE. With Cases. By *Stephen Simpson*, M.D. late Resident Practitioner at Rome. Octavo, pp. 350. London, 1836.

II. ANIMAL MAGNETISM AND HOMŒOPATHY, &c. By *Edwin Lee*, M.R.C.S. formerly House-Surgeon to St. George's Hospital. Octavo, stitched, pp. 40. London, 1835.

III. EXPOSITION OF HOMŒOPATHY. By Dr. *Bureaud Riofrey*.

IV. ARTICLES ON HOMŒOPATHY IN THE MEDICAL GAZETTE. Nos. 467 and 469.

EVERY age has been distinguished for its gross credulity in matters relating to the practice of medicine. In the infancy of the world, or in the absence of civilization, the ignorance that must exist with respect to the constitution of the animal frame, explains and extenuates the belief in absurdities however great, the credit given to impostures however gross, relating to the operation of material or of immaterial agencies upon it. Amulets and

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charms, drugs selected from fanciful analogies of shape, or colour, or smell, the most inert things when consecrated by dogmatism or by superstition, have been found in the materia medica of every rude and every half-informed nation, and have only been banished from it by the gradual march of knowledge and the slow process of enlightenment.

The student of history cannot be surprised at the display of popular prejudice or popular fanaticism. We have felt no astonishment at the exhibitions of our own day—and the rise and fall of successive delusions within our observation have only served to shew that man is the same animal that he ever was, and that, despite of the intellectual character of the nineteenth century, it still contains rogues enough to humbug the public, and fools enough to make it worth the while of rogues to humbug them.

Yet even cynicism must confess, that, in prevalent delusions, all the deluded are not of necessity either rogues or fools. There are many, of enthusiastic dispositions, who are led away by novelty and caught by specious arguments, yet are neither absolutely weak in mind nor wrong in purpose. Every-day experience shews us individuals amongst our acquaintance or our friends, who display this intellectual singularity; and the combination of vigour and weakness, of general right reasoning and of a special folly, is at once curious and instructive. Such a combination is incompatible with great soundness of mind or much depth of information; but observation shews that it is consistent with brilliant intellectual qualities, with wit, eloquence, or imagination.

When homœopathy was first promulgated, the universal derision with which it was received in this country, inclined us to hope that the English public would not be much bitten by the rabid advocates of such mystical foolery. That hope has been scarcely disappointed, although it must be owned that a few persons, with some pretensions to science, have turned proselytes or even professors. Their number, however, has been marvellously small, their names and influence far from imposing, and their efforts have only served to crown themselves with ridicule, and, by provoking argument and free discussion, to accelerate the fall of what it would be laughable to call a system.

The basis of the science of medicine is fact; the science itself should be strictly one of induction. That induction may be more rigorous or less, in accordance with the nature of the facts that it is founded on.

An individual presents phenomena, which in their aggregate constitute disease. We are anxious to learn what that disease actually is, what those phenomena really represent. Death enables us to do this, for then, by dissection, we find certain alterations of the textures of an organ, with the natural state of which we had previously, by appropriate investigations, become conversant. One such observation is compared with many others, and the sum of their agreements and their differences constitutes our knowledge of the disease. All this is a strict and logical process of induction, a process which has led us to most of what we positively know in physics and philosophy.

We have learnt, or seemed to learn, the real nature of that disease. Our next object is to cure it. To do this, we must ascertain the properties of any substance which exerts an influence upon the organs of the body. We re-commence a series of inductive observations. We exhibit the drug, if it be a drug, that forms the subject of experiment, and note the effect that

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it produces. To render the observation precise, the operation of the drug on the healthy organ should be first found, and subsequently its effect on the diseased one should be tested. Again, one observation is corrected by comparison with others, and finally we obtain as the result of our researches the effects of the medicine in health and in disease. Such inquiries repeated by innumerable persons and for many years have led to the construction of our materia medica.

Pathology, then, and the doctrines of our materia medica, our knowledge of the nature of disease and of the means of treating it, are both essentially founded on fact, reared by cumulative observation, and operations of induction. That there are errors is not wonderful, for cumulative observations must be open to them. But those errors are continually diminishing, and fresh experiments and fresh observations which confirm the true, are gradually ridding medicine of much of the false. We say much, for many fallacies there always must be in a science, the subject of whose inquiries is not a physical entity which never changes, but the operations of life, continually agitated by disturbing circumstances so numerous and so subtle as to baffle positive calculations.

To those who comprehend the manner in which medicine has been elevated to a science, and who know that all its most valuable portions are essentially facts, the proposal of a new scheme, which sets aside all former observations, contradicts all previous experience, and upsets, not only theory, which may be wrong, but facts too, which cannot—a scheme, in short, which insulting rational belief as folly, demands the most implicit credulity from its votaries—to all of a philosophical character, such a scheme must appear the height of human folly.

Hahneman, its inventor, knew full well that inductive science and homœopathy were incompatible, and he declared war against induction. He did not hope, he could not hope, to overthrow it, but he probably knew that the fools, like the devils, are named legion, and he appealed to them. This may seem a caricature, but it is not—it is the very essence of homœopathy. Dr. Bureaud Riofrey, a very intelligent French physician, residing in London, has given, in a paper read before the Westminster Society, some extracts from Hahneman's Organon, which establish this point completely. And indeed a little consideration would shew that Hahneman could not do otherwise than reject facts which would oppose his dogmas.

"Homœopathy acknowledges no organic alterations. Hahneman says, that in order to gratify our folly, diseases cannot cease to be dynamic aberrations that *our spiritual life feels*; that is to say *immaterial changes* in ourselves. (Organon, p. 15.)"

As Hahneman denies that diseases are material, he denies too that its causes are so; nay he says they cannot be so. As neither diseases nor their causes are material, men may reasonably inquire what they are. The reply is clear. They are partial alterations of *dynamic* life. Can any thing be more lucid.

"Diseases are not, and cannot be mechanical, or chemical change of the material substance of the body: they do not depend on a morbid material principle; they are merely partial alterations of *dynamic* life." (Organon, 129.)

Dr. Bureaud remarks in reference to this brilliant and perspicuous hypothesis:—

"Therefore, gentlemen, we return towards ontology; diseases are separated

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from the organs, effects are without cause, and our senses are deceived by the phenomena that take place. It is no longer necessary to study and to learn the influence of modifications, of the agents of nature on each of our organs; life and disease are phenomena independent of the body, and all manifestations are produced in such a manner as the profane cannot yet appreciate. Homœopathists only acknowledge dynamic affections: and although this dynamia is but the representation of material effects, homœpathists still maintain that matter has no share in the manifestations." 2.

Dr. Johnson said that he liked a good hater. We must say that we like a good theorist. Of what use is it to propose a snivelling scheme, which any body is capable of understanding? The very height of intellect is to devise what other intellects are neither able to devise nor comprehend. How beautiful is the contrast between the doctrine of disease being a partial alteration of dynamic life, and that poor grovelling induction, drawn from observation, and from the use of men's senses, which seeing certain organic changes correspond uniformly with certain symptoms, terms those symptoms the disease and those changes its material causes. Simplicity has been thought to be the merit of the science of causation;—how falsely this new philosophy proves.

Hahneman proceeds to declare that symptoms are the external image of the internal disease, and that they alone merit the patient's attention. A slight metaphysical difficulty occurs, which it would be well, perhaps, to get rid of. We know there are symptoms, from observation. A patient, for instance, says he has a sharp pain in his side. That pain is not an object of sense to us. He breathes quickly and imperfectly, for his face is blue. These are objects of sense. He suddenly dies. The lung, which we know to be the organ of respiration, is found choked with serum, lymph, and pus. This is an object of sense too, and the ignorant physician, taking it with the symptoms, concludes this was the cause of the pain and the dyspnœa. But the homœopathist says no. That is material, but diseases are immaterial, therefore that is not the cause of the symptoms. The difficulty, then, is to conceive how material symptoms, hurried respiration, and asphyxia, can have an immaterial cause—and how material alterations of the respiratory organs shall not be the cause of symptoms. A reasoner not imbued with the true spirit of homœopathy finds it hard to believe, that a certain mode of respiration shall be the consequence of a lung healthy, and that an altered mode of respiration shall not follow from a lung altered. But this captious disposition to inquiry is not favourable to the reception of homœopathic truths.

If disease be only symptoms, there are some things that require explanation. Dr. Bureaud ignorantly asks:—

"But let us now inquire how homœopathists act when the symptoms of an existing evil are not evident. When an individual is bitten by a mad dog, will they prevent the wound being cauterised, when there are no other means of stopping the progress of the virus? Is there no disease because there is no symptom? and will they wait till the patient is attacked with the dreadful convulsions attendant on this fearful disease, to administer a quadrillioneth part of a grain of belladonna, of hyoscyamus, or stramonium? Can it then be said that the *tolle causam* of ancient medicine is a chimera? that the disease in this case, as in a thousand others, is but a dynamic aberration of *our spiritual life?* Will homœopathists then assert that they have not seen the cause, as they say they have not seen Vanhelmont's thorn. Will they then inquire what quantity of rabid

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virus has been absorbed, in the same manner as they ask what quantity of syphilitic virus has penetrated?" 3.

Dr. Bureaud is an unreasonable man. What is the utility of a mystical truth, unless it is to put down sophistical scepticism, unless it is to silence specious objections? It seems more consonant with fact to believe that a boy being bitten by a rabid dog, and afterwards becoming rabid, has received a virus, which has remained for a period quiescent—but can reason be opposed to authority—are facts to be weighed against the assertions of the great Hahneman?

This prophet, like his illustrious and ingenious predecessor Mahomet, spent many years in reflection. We have seen that symptoms have no causes, save a dynamic alteration of our spiritual life. One great advantage of homœopathy is, that it not only contradicts all facts, but it is enabled to contradict itself, without being in any degree the worse. Thus, after twelve years of intense meditation, Hahneman determined that diseases are acute or chronic, and that chronic diseases *have* a cause—syphilis—sycosis—*or* the itch.

"This—the itch," says the philosopher, "is the only real, fundamental, and productive cause of all the morbid forms known by the names of weakness, nervousness, hysteria, hypochondria, mania, melancholy, epilepsy, spasms of all kinds, rickets, caries, cancer, fungus hæmatodes, gout, hemorrhoids, jaundice, cyanosis, dropsy, amenorrhea, gastrorrhagy, asthenia, sterility, cataract, gravel, paralysis, and pains of all kinds, &c. &c." (Org. p. 183.) 3.

A great mind strikes out a path for itself. Who would have imagined that the itch was the cause of diseases apparently so dissimilar as cancer, cataract, and the gravel—of asthenia and gout—rickets and pains of *all* kinds? Here is indeed the evidence of genius. Yet sublime conceptions have sometimes flowed from the most trivial causes. Perhaps this magnificent idea may be traced to the sage having suffered from the "Scotch fiddle" himself. We diffidently offer it as the only explanation that occurs to us, of this immortal discovery. We pause. It is useless to pursue a doctrine which is made up of such marvellous principles that it is not necessary for it to be in any way consistent with itself, with fact, or with anything. It is better at once to receive the whole science at a swallow, and extend to it that implicit belief which it requires. It is of no avail trying to make it consistent with reason, and reason therefore should succumb.

Fortunately, Hahnemann was not a mere speculator. His object was not simply to divulge a scientific revelation. He was anxious to benefit humanity substantially as well as to delight it, and he has given us such a system of pharmacy and therapeutics, as is worthy of the pathology on which it is engrafted.

"Having in 1790 taken some bark, which produced, as he states, paroxysms of intermittent fever, he was struck with the circumstance that the substance employed for the cure of intermittents should occasion a similar disease in a healthy person. This led to the inference that substances which produce certain symptoms in healthy individuals can remove these symptoms when induced by other causes; hence a fundamental point of the doctrine, that diseases are cured only by medicines which have the power of causing similar diseases in healthy persons: *Similia similibus curantur.*" 23.

It might appear odd that cures have taken place before this truth was discovered. The explanation is obvious and conclusive.

"To prove that many of the cures hitherto effected have been so by the

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chance employment of homœopathic means, several instances are brought forward, among which are, that rose-water cures ophthalmy only because it has the power of causing a kind of ophthalmy. In like manner bark cures intermittents, because it occasions these diseases: ipecacuanha arrests fluxions of blood, only because it possesses the faculty of exciting hæmorrhage; generous wines, in small doses, cure homœopathically inflammatory fever; hyoscyamus could not cure spasms resembling epilepsy, if it had not the power of exciting convulsions; the same remedy could not have cured a case of mania from jealousy, i it did not occasion mania and jealousy in healthy individuals." 25.

The facts are as ingenious as the explanations are convincing. How many times must hyoscyamus have caused jealousy, and yet we have never noticed it. Ipecacuanha too must, on countless occasions, have given rise to alarming hæmorrhages, without attracting the observation either of the patient or physician. Ophthalmia from rose-water must be of daily occurrence, and it must possess the singular property of blinding not only those who have it, but those also who try to see it.

Our therapeutics are indeed simple. Pneumonia is a disease of inflammation. It must be treated by producing more inflammation. Induced weakness cannot rationally be supposed to master a disease of strength. Devils are driven out by Beelzebub, because he is the prince of them.

"It is the extreme of ignorance to think of curing pneumonia by bleeding; for the rapid operation of vital strength would in most cases cease unaided; but it might also overpower the *vis medicatrix naturæ*, for it is a general rule that strength overpowers weakness. Instead, therefore, of arresting the operation of the vital force, which Hahnemann terms blind and vulgar nature, his great discovery is to *increase* it by artificial means, by an analogous and artificial disease, as nearly as possible resembling the original one." 4.

If the principles of Hahnemann's therapeutics equal those of his pathology, the details of his materia medica are not unworthy of both. The principle on which a drug is given, is the immortal one—similia similibus curantur. The drug produces a disease which puts the existing one to flight. The first object is, therefore, to ascertain, by experiments on healthy people the effects of various medicines, in other words, the disorders which they cause. This has been done with the success that might be expected to crown the efforts of one, whose genius has discovered the memorable fact, that the itch is the cause of most chronic maladies.

It is difficult to determine how Hahnemann discovered the mighty truth, that the potency of medicines increases in the ratio of the decrease of the dose. It is humiliating to reflect that the world should so long have believed in the opposite pernicious error; and it is impossible to account, for what seems the fact, that poisons destroy those people who take them not in little but in large quantities. No reasonable man would set the evidence of his senses against the assertions of Hahnemann, and we receive with the submission they deserve the following revelations.

"The effects of medicinal substances," says the philosopher, "are two-fold, viz. primitive, as the violent action produced by large quantities of certain drugs; purgation, sweating, &c.; and secondary, or homœopathic, in which the action is determined towards the diseased part; the active properties becoming more developed in proportion to the minuteness of the dose: in fact, homœopathists are cautioned against too minute a subdivision of the medicine, lest it should become so energetic as to give rise to dangerous symptoms." 27.

It is not the mere subdivision of the medicine that so alarmingly aug-

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ments its strength—it is also the shake that the adept gives it. We tremble when we think what mischief has been done by the incautious direction too frequently labelled on a draught, "when taken to be well shaken." Hear Hahnemann himself.

"Besides, the homœopathic medicament acquires at each division or dilution an extraordinary degree of power by the friction or the shock imparted to it, as means of developing the inherent virtues of medicines, unknown before me, and which is so energetic, that of late, experience has obliged me to shake only twice, whereas formerly I prescribed ten shakes to each dilution." 27.

What a train of reasoning and experiments, what profound sagacity must have been expended by the *Maestro*, in determining the number of the shakes. It may indeed be said of him, now that he has limited them to only two, that he is "no great shakes" himself. Forbid it Heaven that he should be so, for then he would literally "be the death of us."

Whichever way we turn, we find some popular error corrected, some established fact disproved. We have learnt that the danger of doses of medicine depends on their infinite minuteness. We shall find that substances always deemed inert are possessed, in homœopathic doses, of potent and peculiar properties. In a former article in this Journal we made some extracts from Dr. Quin's edition of Hahnemann's Pharmacopœia, and astonished our readers, with the description of the properties of the common "fever-few." We need not now repeat them, for probably the profession is well acquainted with them. Yet we may remark, that some of them are worthy of the science. Dentium elongatio, lengthening of the teeth, was found to result from an infinitesimal dose of the drug, and other effects equally peculiar, exhibited its powers.

"Gold, silver, platina, charcoal, are without action on man in their ordinary state, but from the continued trituration of a grain of gold with an hundred grains of powdered sugar, there results a preparation which has already great medicinal virtue. If a grain of this mixture be taken and triturated with another hundred grains of sugar, and if this process be continued until each grain of the ultimate preparation contains a quadrillionth part of the grain of gold, we shall then have a medicament in which the medicinal virtue of the gold is so much developed, that it will be sufficient to take a grain, place it in a phial, and cause the air from it to be breathed for a few instants by a melancholy individual, in whom the disgust of life is carried so far as to incline to suicide, in order that, an hour afterwards, this person be delivered from his evil demon, and restored to his taste for life." 28.

If smelling a quadrillionth of a grain of gold can effect so much, what would a quadrillionth of *it* do? We cannot contemplate with calmness the consequences of the square root of a quadrillionth of a grain. It would poison a regiment. Our contemporary, the Medical Gazette, has been perusing with much diligence the materia medica of Hahnemann, and has made some extracts from it, on the properties of charcoal and of gold, which tend to increase our admiration of the homœopaths. Their scientific investigations are of a very original and pleasing character, and strongly remind us of the researches of Philosopher Square and Molly on "the eternal fitness of things." Imagine a homœopath (Gersdorff is his name) eating one night a prescribed supper, consisting of French beans, green peas, and carrots, and swallowing the millionth of a grain of charcoal. He retires to rest, and abstracting his attention from all else, he accurately notes the effects of that not trivial dose. Soon he hears with delight:—

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308. Emission sourde de vents presque inodores, humides, et chaudes.

In an hour and a half, he not only hears but he smells the gale.

312. Vents ayant un odeur putride.

The odeur putride is not offensive to the homœopathic nose, for it tells of the triumph of the art. The charcoal, however, has not yet done all, or nearly all, it is capable of doing. It works whilst the homœopath slumbers, and there results;—

375. Erection continuelle pendant la nuit, sans sensations ou idées voluptueuses.

When the homœopath wakes, it is only to philosophize, for instantly there is—

312. Enorme emission de vents sans odeur.

How charming! But he has not done. A female homœopath, the representative of Molly, has had her commissions to execute, and before the two compare their notes, Gersdorff, remembering the erection continuelle pendant la nuit, hints the fact to his fair associate, but—

376. Il ne peut meme être excité par des idées lascives.

Let us leave Gersdorff, in his vain attempts to obtain a repetition of the "érection continuelle," and turn to the experimentress. She has taken a millionth of a grain of charcoal too, and probably eaten of the same windy diet of beans and pease. She does not however generate "vents." Gersdorff was the Œolus, and furnished them. Had both been equally *ventoses*, the late storm would have been nothing to the turmoil "'twixt the sheets." The lady modestly complains of an—

378. Ardeur dans les parties genitales.

This increases, and soon there is—

377. Forte excoriation aux parties genitales.

We drop the curtain on the two philosophers. We are told, indeed, of various "pollutions," "pertes de semence," and "emissions de vents," but as the Allopaths have not arrived at the happy pitch of disregarding common decency and common sense, we must, in deference to such prejudices, quit the subject.

Homœopathy, such as we have depicted it, founded on such reasoning, supported by such facts, has been put, in some quarters, to the test of practical experience. The results might be anticipated.

"A German homœopathist, practising in Russia, was invested by the Grand Duke Michael with full powers to prove, if possible, by a comparison of facts, the advantages of homœopathic measures over the ordinary modes of treatment; and a certain number of patients in the wards of a military hospital were entrusted to his care. At the expiration of two months, however, he was not permitted to proceed further; for, in comparing results, it was seen that within this period, of four hundred and fifty-seven patients treated by the ordinary means, three hundred and sixty-four, or three-fourths, were cured, and none died; whereas, by the homœopathic method, tried on one hundred and twenty-eight patients, one half only were cured, and five had died." 30.

In consequence of this and other trials, the Russian government looked on homœopathy as humbug, and published the results.

Such is a slight sketch of the principles and the practice of homœopathy. It may be shortly characterised as the most impudent insult on the common sense of men, that has ever been offered to it in any age or in any country.*

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* Dr. Simpson's work, professing to exhibit new views of homœopathy, will be found noticed separately, in the department of the present Number appropriated to "Miscellaneous" matters.

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Periscope;

OR,

CIRCUMSPECTIVE REVIEW.

" Ore trahit quodcunque potest, atque addit acervo."

Notices of some New Works.

RETROSPECTIVE ADDRESS, DELIVERED AT THE FOURTH ANNIVERSARY MEETING OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION, HELD AT MANCHESTER, JULY 21ST, 1836. By JOHN GREEN CROSSE, Esq. F.R.S. &c.

THIS Address is contained in the volume of the Provincial Transactions, published at the same time as the present Number of our Journal. Through the kindness of Mr. Crosse, we have been favoured with a glance at his interesting paper, and take the opportunity of offering a slight sketch of it, and of making a few extracts from it.

The object of Mr. Crosse is to exhibit the improvements that have been effected in any of the departments of medicine in the course of the preceding year. The industry of Mr. Crosse ensures his doing justice to the voluntary task, and he has done justice to it.

It would be preposterous pursuing the details of an address of this sort. In most instances, it must offer a mere catalogue of papers published or of facts related, and, at all events, many, if not most of both have been already noticed in the pages of this and of the other journals. We shall, therefore chiefly occupy ourselves in picking out a fact or two here and there.

1. *Anatomy.* Mr. Crosse observes with great justice, that the diffusion of anatomical knowledge is remarkable. It is, indeed, surprising what a rapid stride has been made within these very few years in the mode of teaching anatomy, and in the amount that is acquired by students. Systems of anatomy that a little while ago were considered excellent, and were received as standard works, are now neglected as superficial or condemned as inaccurate. Teachers who were amongst the most popular of their day, are now deserted, or regarded as the representatives of a system that is virtually extinct; and pupils who formerly would have been regarded as prodigies of anatomical information, would now stand little chance of obtaining a prize in any first-rate London school. These improvements are generally attributable to the spirit of the age—their particular source may be found in the brilliant results that flowed from physiological experiments, in the attention that was naturally directed to anatomy, in the more strict application of geometrical principles to its investigation and description, and, finally, in the competition of the schools themselves.

It is not, then, in the discovery of new facts in anatomy that we shall find much cause for congratulation; but it is in the more philosophical manner of viewing established facts, and in the more precise and scientific mode of teaching them, that our advance is most perceptible. The good that will spring from this is greater than at first sight it may appear. The student does not merely acquire a few facts and principles in the brief but eventful period of his pupillage—his professional mind is then in a great measure formed, and its subsequent bent will materially depend on the impulse given to it. If exact habits of thought are nurtured, if precision of observation, of ideas, and of description is encouraged, we may anticipate the best fruits in after-life from

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such intellectual education and discipline.

The anatomical discoveries of the year are thus summed up by Mr. Crosse.

Drs. Breschet and Roussel, trusting to microscopical observations, have minutely described the anatomical appearances of the skin, and satisfactorily demonstrated the sudorific exhalent ducts; the inhalents they have not been able to follow to a termination on the outer surface of the skin, and wish, therefore, that their account of them should be received *salvo errore*. Professor Müller has discovered some remarkable appendices connected with the minute arteries of the *corpus spongiosum* and *corpora cavernosa*, which promise to throw light upon the structure of the blood-vessels in all the erectile tissues.

2. *Medical Statistics of the Army.*

"There is a proceeding which I have not found advocated, and which it would well become a liberal Government to adopt. For nearly twenty years past, through the admirable regulations of the present Director-General of the Army Medical Department, returns have been made of all cases of disease in the British army, whether stationed at home or in any of our Colonies; every fatal case from disease has been inspected, and a detailed account of the morbid appearances, often accompanied by the morbid parts when interesting, has been transmitted to the central office: thus documents of the greatest value, referring to the diseases of all climates, and to a limited and well-known population, have been accumulating, until they are become so voluminous, that no chance remains of their being turned to public use, unless a competent person be appointed and properly paid, for putting them in order.* That such a step should be taken seems due to Sir James M'Gregor, whose assiduous and firm pursuit of a wise system, in the medical department over which he presides, has placed in the hands of Government the materials for an annual publication of statistical information, that could not be promulgated without producing great benefit."

We heartily concur in this suggestion of our author's. But "half a loaf is better than no bread," and if we cannot have the documents in arrear, or rather an elaborate analytical digest of them, we can, at all events, have a half-yearly or a yearly report of those which are to come. None can be more disposed than Sir James M'Gregor, to do the utmost both for his particular service and for medical science. We should conceive that there are many assistant-surgeons or surgeons in the army, whose services the excellent Director-General could command, and who would gladly avail themselves of the opportunity of drawing up, with his supervision and sanction, a periodical report. The journals might be made available for its publication, and the only trouble would be that of collecting, comparing, and digesting the materials.

3. *Retraction of the Tongue.* An infant was labouring under symptoms suddenly arising, and seeming to threaten death by suffocation; the physician, fortunately, discovered that the tongue was retroverted, its apex reaching into the œsophagus; the tongue was readily replaced, with relief to all the symptoms, but the trouble recurred frequently. Mr. Crosse knew one instance, where the tongue could be *swallowed* at will without inconvenience. It was in the case of a lad, who, in the playful period of his recovery from fever, was asked to shew his tongue and presented his open mouth with no tongue visible; as soon as his mouth was shut, he asserted that his tongue was in its right place, proving it to be so: there was such facility in retro-

* "The Government have, I am informed, recently appointed a Commission, composed of three gentlemen, of whom two are medical, to inspect and arrange these documents, with a view, it is hoped, to their being promulgated in a useful form. The arrears being disposed of, an annual statistical return could readily be furnished."

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verting the tongue into the pharynx, that he frequently repeated the trick afterwards.

4. *Entozoa in the Human Body.*—Since Mr. Owen first discovered the trichinia spiralis in the muscles, these entozoa have been widely and frequently noticed. In a piece of muscle an inch square possessed by Mr. Crosse, there are between one and two thousand. The *cysticercus adiposus*, not uncommon in the fat of swine and some other animals, has also been recently, for the first time, observed in the human subject, by a former pupil of Mr. Crosse's, Mr. Baron, abundantly occupying the cellular intervals of many of the voluntary muscles. Dr. Knox has published an account of Entozoa found beneath the intestinal mucous membrane of the horse.

5. *Homœopathy.* The following are Mr. Crosse's opinions on the extraordinary combination of folly and of humbug, which goes under the name of homœopathy. Setting aside the opinions, the statistical facts he records are not uninteresting. They shew, or seem to shew, that even in Germany this most preposterous foolery is on the decline.

"Enthusiasts as extravagant are met with in theoretical medicine, as in the worst forms of religious superstition; but nothing has, I believe, arisen within a century, surpassing or even equalling what has been dignified with the name of the 'homœopathic system.' This germanic reverie of transcendental nonsense—*cui fumus est pro fundamento*—built upon smoke! would not deserve to occupy the time of the present enlightened assembly, had it not made some stir in the country of its origin, choking the press with visionary treatises and worthless periodicals, and spreading gradually through several parts of Europe, and even of the Western world;* a doctrine inferior to Brownism, curing or pretending to cure as magically as by mesmerism, animal magnetism, and the royal touch; a doctrine at variance with every rule of the inductive philosophy, and of the causation of diseases; a doctrine essentially setting forth that the effect is

* "In Germany nearly twenty books were published upon the homœopathic doctrine, in 1832; in the following year twice as many issued from the press; in 1834 the number amounted (according to Dr. Bluff, who has kindly facilitated my enquiries) to sixty-four; and in 1835 I find *only* thirty-one enumerated. The author of a dense volume on this medical mania (*Die Homöopathie von der practischen Seite beleuchtet, ein Lesebuch für Aerzte aller Confessionen, herausgegeben von Dr. F. Lesser*, Berlin, 1835,) occupies about twenty pages in referring to different works upon the subject, and quotes the remark that 'the doctrine has spread like the cholera, and will go round the world!' Dr. Lesser specifies twelve homœopathic or anti-homœopathic journals in 1835, (p. 6); four journals are still forthcoming in Germany, one against the doctrine. Notwithstanding the decision of the Royal Academy of Medicine of France, against the system, I find that seventeen homœopathic treatises issued from the press in that country, in 1835, and a journal devoted to it is regularly published in Paris; another journal appears in the same language at Geneva. Italy also has its homœopathic journal, issuing at Naples; Spain had one, which has been *put at rest* by intestine troubles *without assassination*. It is well known that in Russia, physicians were forbidden to practise according to this new system, in public institutions. Dr. Otto remarks that in Denmark but *one* medical man has published upon 'this foolish *system* of medicine, and one of the bitterest satires upon it;' and he thinks the sound sense and judgment of the faculty and the public will prevent its taking root in Danish soil. Holland remains equally free; whilst the profession in Belgium is strongly imbued with the homœopathic disorder, as is abundantly shewn in their medical journals, and in the reports of their discus-

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greater as the cause applied is less,† and leaving no rational explanation of a cure in the cases where a cure is effected, otherwise than by regulated diet, and the natural restorative powers of the living system, aided by the imagination of a confiding patient. The enthusiast and the charlatan are always industrious, and in our too conjectural art, when any theory, however vague and preposterous, gets afloat, fancies are soon mixed up with some realities, and in time things actually become combined with the imaginary in endless perplexity; thus support is gained, new combinations are formed, and something useful is occasionally elicited even by the worst and vainest of doctrines. It is, however, but the fruitfulness which is found to arise from digging the soil in search of a supposed hidden treasure that does not exist."

Mr. Crosse proceeds to compare homœopathy with the famous cure of wounds, which is well known as Sir Kenelm Digby's sympathetic salve.—This was applied, not to the wound, but to the weapon, and answered marvellous well. But we need not say more upon the subject, which has been touched on in another part of the present number.

6. *What a dangerous person a mere operator is.* Journalism has its evils. A great one is its power of conferring undue reputation on partizans, and of trumpeting one man at the expense of others. This is bad enough under any circumstances, but if qualities are selected for adulation and for puffing, the possession of which is dangerous and the exercise indiscriminate, the evil in a moral, as well as in a professional point of view, is aggravated.

There are few things more calculated for display than operations performed with coolness and dexterity. They appear to the ignorant the triumph of surgery, and the vulgar stare with astonishment and delight at the manipulations of the scientific butcher. Yet such sleight of hand, if not restrained by the higher qualities of intellect, if not guided by caution, directed by experience, and governed by sound reason, is a curse to the community, and a disgrace to medicine. When a hospital is turned into human shambles, and patients are mutilated that operators may shew off, every man possessed of common sense and common decency reprobates the brutal exhibition.

Amongst the really well-informed members of the medical profession, the taste for great operations has happily declined. They are justly considered the disgrace of science, and its progress has been signally and nobly distinguished by the gradual diminution of them. An operation prevented is really a triumph—an operation absolutely necessary, is a calamity—an operation unnecessarily executed is butchery.

When we reflect how small is the number of cases really requiring capital operations—how great is the number in which science may prevent and ignorance perform them—we shall feel how dangerous that man must be, whose chief merit consists in his handicraft

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sions. America is not quite clear of the same charge, though not burthened with a specific journal. In England we are still more fortunate; we hear, indeed, of 'homœopathic powders,' curing as wonderfully as the *powder of sympathy;* but we are only arrived, so far as I know, at the third book on *homœopatheia*, and from the pen of an author, whose name stands very low in the alphabet. (August, 1836.)"

† "Hahneman assures us he can cure intermittent fever with millioneth, and syphilis with sextillioneth doses of mercury!—*The Lancet.*—When Lord Bacon spoke of 'commanding so over the medicine that the medicine cannot command over the disease,' he never divined of such a system as this, where 'the active properties of each remedy become more developed in proportion to the minuteness of the dose;' in short, 'homœopathists are *cautioned* against *too minute a subdivision of the dose*, lest it should become so energetic as to give rise to dangerous symptoms!!'—*Lee's Observations on the Medical Institutions of France, Italy, and Germany*, p. 203. 1835."

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work—and who, incapable, perhaps, of much reasoning, indifferently skilled in the treatment of diseases, is naturally induced to attach most importance to what he best knows, and to prize that which he is conscious of excelling in. In the infancy of surgery, a mere operator would be admired and consulted—its advance would serve to make him shunned. But we return to Mr. Crosse's remarks.

"A fondness for certain operations, and a degree of over-zeal in seeking for occasions to perform them, are modern traits of professional character, which it is to be hoped, will become obliterated or obscured by the daily improvements in pathology and the diagnosis of diseases. The mere operator ought not to be ranked amongst the best of surgeons, and the kidnapping of such patients as furnish conspicuous cases for an hospital theatre, or for the more private assembly of a *coterie* of young operators, should be discountenanced and denounced by every conscientious cultivator of surgical science. Led by a close investigation of symptoms to the necessity of the undertaking, how much more creditable is it for the surgeon to *paracentize* the chest for empyema, than to *lithotomize!*"

7. *Ligature of both Carotid Arteries.* We may refer to the present Number, for an account of the experiments of Sir Astley Cooper on the ligature of the carotid and vertebral arteries in animals. Man, it appears, will not bear the simultaneous stoppage of the current of blood through both carotids.

"Professor Mott* has tested this question, and a case came under my own observation very recently,† shewing how fatal is the tendency of a ligature applied almost simultaneously to each of these arteries. An approximation has, however, been made towards ascertaining the shortest interval at which the second carotid may be safely tied after a ligature to the first, and it has been safely done at an interval of thirty-eight, seventeen, and even twelve days.‡ Amongst the most striking of these cases, is that related by Professor Kuhl, of Leipsig,§ who, on account of a pulsating aneurismal tumour of the scalp, arising from a wound of the occiput, and extending over nearly the entire surface of the head, attended by frequent hæmorrhages, first placed a ligature on the left common carotid; the procedure only partially subduing the disease, and frequent hæmorrhages from the affected portion of the scalp still occurring and threatening life, a ligature was put upon the right common carotid after 27 days; this was followed by convulsions, but after a train of very troublesome symptoms, the patient recovered and was cured of his disease. It is worthy to be noticed

* "Both carotids having been tied nearly simultaneously, with the view of arresting the growth of an enormous tumour in the situation of the parotid gland, the patient survived about twenty-four hours."

† "An attempt having been made to remove a tumour of small size, implicating the right parotid gland, the operator on this sad occasion wounded a large artery deeply situated, anterior to the mastoid process; a ligature was put upon the right common carotid, but without any good effect; the hæmorrhage continuing, I was called on the emergency; tying the left common carotid was suggested, but even *pressure upon it*, so as to interrupt the circulation, *produced insensibility and convulsion*, and seemed to threaten extinction of life; *the experiment* was twice made with the same effects; by a dip of the needle I after some time inserted a ligature which stopped the bleeding vessel. The respect I entertain for professional decorum precluded my again seeing the patient, who lost his life by the undertaking which he was persuaded to believe necessary to save it."

‡ Dr. Mussey in America.—See "*Cyclopædia of Anat. and Phys. by Dr. Todd,*" article "*Carotid Artery.*"

§ The case is related in *Radius and Clarus' Beiträge zur practischen Heilkunde;* also at length in the *London Medical Gazette*, vol. XVI. p. 816.

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that in this, and also in other like cases, some days after both carotids had been tied, heaviness and throbbing in the head have occurred, requiring free venæsection, the sensorium being unable to bear the impetus of the returning circulation after having for a time received so scanty a supply of blood."

8. *Ligature of the Gluteal Artery.* This has been lately performed effectually. It is the fourth time that the ligature of the vessel has been recorded.

9. *Operations on Dilated Veins.* Mr. Crosse notices several operations that have been proposed or performed for varices and for varicocele. We dedicated a short article to M. Breschet's mode of treating varicocele. We confess that we feel some degree of repugnance to these operations on the veins. The principles on which they are most of them founded are questionable, if not positively false, and in practice they have proved to be much more hazardous than their supporters would wish us to believe. We should be very loth to meddle much with veins. We seldom do much good, and we may at at any time do harm. The last proposal has been that of Dr. Fricke, of Hamburg. He has treated varicocele, circocele, and varix, by passing a fine thread through the dilated vein, and allowing it to remain from twenty-four to forty-eight hours, according to the degree of increased action excited; and after trying the method in sixty cases, he recommends it as being not more simple in the performance than it is safe and certain in its effects. The simple objection to all operations of the sort is this. They most of them produce some inflammation in the vein. Now phlebitis is of that character, that, once excited, we never can be certain when or where it will be limited. This is an objection founded on the hazard of the operation. There are others, arising from its inefficiency. The argument adduced in support of these operations is a very strong one against them. Phlebitis, it is urged, may follow even venæsection. Exactly so, and if it does succeed so simple a proceeding, how much more likely is it to result from one which is not simple?

10. *Reduction of Dislocations and Dynamometer.*

"Ancient dislocations of the hip-joint have been reduced from forty to nearly an hundred days after the accident; dislocations of the shoulder-joint of very long standing are also reported within the year to have been replaced. Luxations of both radius and ulna backwards have been reduced at sixty-three, and even at seventy days; but it may be well to mention, that in one of these cases the olecranon was fractured in the attempt (owing to *the obstinate resistance of the triceps*), which a little retarded the cure, as the fracture took five weeks to unite; the patient regained the full use of the limb. The most important contribution in this branch of surgery which it falls within my province to name, is the Memoir of Malgaigne, a document rich in pathological details and novel views, yet so extensive as not to allow of my doing more than mention it in these commendatory terms. This surgeon has repeatedly used the *dynamometer*, for measuring the degree of extension employed with the pulleys; in one case the extending force applied was equal to 250 or 300 pounds. Mr. Weiss, of London, has constructed a *dynamometer* for me, which seems to answer every purpose; I conceive that such an instrument, constantly used when the pulleys are required, may be turned to great practical advantage; it cannot fail to indicate correctly the degree of force applied in each case, and as experience accumulates, serviceable rules, as to the degree of extension admissible at different ages, and on particular joints, may ultimately be laid down in every systematic treatise upon the subject."

11. *Odds and Ends.*

a. Mr. Lewis has written on the palliative treatment of hydrocele by acupuncture. We tried this two or three years ago in several cases. We might just as well have read a chapter of Tom Jones over the scrotum; *that*,

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indeed would have been a pleasanter proceeding both to the surgeon and the patient, and every whit as effectual.

b. Dr. Fricke treats inflammation of the testicle by strapping. If the doctor should chance to get "hernia humoralis" himself, we recommend him to apply the remedy. When we recollect that this disease is usually the result of extension of inflammatory action along the cord, and that it invades the fibrous as well as mucous membranes, we shall see more cause to admire the novelty than to anticipate much from the success of such a measure. It is one of those amusing bubbles that ingenious men occupy themselves in blowing, and other people in endeavouring to catch.

c. A small Family.

"In a respectable Italian journal, I find it affirmed, that a lady had forty-five children, (including some abortions,) and often with an interval of only five or six months; and the writer asks whether a double uterus might not have been present, to explain this extraordinary instance of fecundity? Such duplicate organs, we well know, are occasionally met with; in the same journal just referred to, a case of double urinary bladder is described, with the particulars of the dissection."

Well may Mr. Crosse slily hint, that the readers of Journals should possess a large swallow. It is indeed marvellous to look on the rubbish that is periodically printed—so many niaiseries—so many extravagant fancies—and so many downright lies. The profession need a critical journal to keep down the quantity of current trash.

d. Extraordinary Delivery.

"Malignant soft tumors, whether of the uterus or ovarium, when they present themselves in the vagina at an advanced period of utero-gestation, give to the less experienced medical attendant the idea of a *placenta prævia*, and many have acted under this erroneous impression. One of the most extraordinary cases I ever was summoned to, proved to be of this description; the operator passed his hand through the soft tumour in the vagina, and, missing the uterus, entered the abdominal cavity, seized and ruptured the gall-bladder, and actually delivered numerous biliary calculi *per vaginam*.*"

The concluding portions of Mr. Crosse's elaborate and excellent Address are devoted to the consideration of matters of a less practical, yet not less interesting character. They touch on the state of the medical press, general as well as periodical—on the application of lithography to the elucidation of anatomical or pathological science—on medical statistics—and on other matters of a similar description. Perhaps the most interesting subject to us is, that of medical periodical literature. Yet, though we may feel flattered at the manner in which we are particularly alluded to, we do not suppose that our readers can participate in our feelings on the subject, and we therefore dismiss it with this simple expression of thanks to Mr. Crosse for his good opinion.

But there is a point on which we cannot forbear from offering a remark or two. Mr. Crosse has forcibly pointed out the evils which have sprung from the mode in which the weekly medical press is conducted, and the vices which

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* "I communicated this case sometime since to Professor Naeglé, for publication in a foreign journal. I was not summoned until after the decease of the patient; and in the presence of three practitioners I opened the body. Numerous fungoid tumours arose from the right ovarium, and one of them, descending into the pelvis, had presented in the vagina, and being torn, furnished the hæmorrhage; pieces of this soft tumour were removed, and appeared to be the placenta, and some loss of blood continuing, delivery was determined upon, but no fœtus could be found; the hand of the accoucheur had passed through the soft tumour occupying the vagina, into the peritoneal cavity, and the gall-bladder, filled with biliary calculi, had been seized in the search for the foot of the fœtus. Dissection verified the occurrences as I have stated them; the uterus and its appendages are in my pathological collection."

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are in some measure inherent in its constitution. It would be an injury to medical literature, if the weekly journals became the sole vehicles of criticism. There are, and probably there ever will be, political parties in the medical profession. Faction is as much the child of liberty, as any of its numerous blessings are, and whilst in a free country there are some who get, and many more who want to get, the two will always be opposed in politics.

Now the weekly journals are peculiarly the organs of political feelings, and it is Utopian to imagine that they ever can be otherwise. All we can reasonably expect from them is, that they will evince some regard to justice and to *truth*. Unfortunately that has not been always the case.

It is hardly possible that a political journal can be a scientific one. Party predilections will insensibly or avowedly influence criticism, and if once suspected, still more if convicted of unfairness, its utility is irretrievably damaged.

Independently of these considerations, criticism of a high order, and circumstantial analysis are incompatible with the constitution of a weekly journal. Rapid in its revolutions, confined in its dimensions, motley in its character, and in some degree ephemeral in interest, it assimilates more to the nature of a newspaper than of a review, and elaborate notices of works are neither possible, nor, if possible, would they be tolerated. Variety is at once the essence and the charm of a weekly journal, and it may even be doubted if the present mania for publishing elementary lectures in its pages is not carried a little too far. Be that as it may, it is certain that its form is not calculated for reviews, and that a journal of greater bulk, of greater gravity of character, of more freedom from political bias and from personal considerations, and with longer intervals between its times of publication, is necessary for analysis and biblical criticism.

On these, and on many other accounts, we think that it would be an evil, and a great one too, if the quarterly medical journals should become extinct. Yet there are those who have declared that the weekly journals are sufficient for the intellectual wants of the profession, and represent its intellectual appetites. On the occasion of the establishment of a new quarterly journal, a short time back, the editor of one of the weekly journals, observed that the Medico-Chirurgical Review was too popular and too well-conducted to render a new periodical necessary, and that, in fact, the quarterly journals were become effete and altogether superfluous. We thank our contemporary for the personal compliment, but must stand forward to defend our order. We admit the ability with which the weekly journals are conducted, and we are sure that they are now indispensably necessary. They are the newspapers of the profession, and it cannot do without them. But, as we have already stated, not only their form, but their very constitution unfits them for elaborate analysis, or for the higher purposes of criticism. When so many works are published, some good, many indifferent, and some utterly worthless, one critical review, at least, is wanted, one quarterly journal, if not more, is indispensable.

It may be urged that analysis and biblical criticism might be consistent with the scope and objects of a weekly journal, supposing that political partialities could be restrained. But that is impossible. There are not only two great political parties in medicine, as in all else, but from the very constitution of things, there ever will be. The two antagonistic principles of inertia and change are daily assuming more distinctness, are daily becoming more opposed, and time which softens most other animosities must necessarily perpetuate, if not aggravate the virulence of the parties in this quarrel. Newspapers in all essential respects, the weekly journals must hold their existence by the tenure of party feelings, and by the advocacy of party interests. Two experiments have been made to determine if a journal can be supported without party, and those experiments have signally failed.

The criticism of medical books differs

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from that of works in general literature in one important respect. The medical critic must not simply be a learned man, nor a clever man, he must be also a practical man. A practical man, in our profession, is one who sees something, at least, of practice, and who hopes to see more. But such a man will never connect himself with the management of the weekly press, for whichever side he takes, the political animosity that he must encounter will, he knows well, injure his professional prospects. That is another reason, and the most powerful of all, why the biblical criticism of the weekly press can never attain to much respectability.—The radical journal can command only the services of low adventurers, who knowing little, cannot tell us much. The conservative journal cannot, in this instance, obtain the services of those whom it supports, because they are conscious that the advantage is not proportionate to the trouble and the risk.

The only chance which the profession has of obtaining criticism at all worthy of a scientific body, is by its support of the quarterly journals. They are so little mixed up with politics,* that men in good practice, or expecting good practice, do not dread writing in them, and the profession has the advantage of seeing books reviewed by men of education, and of practical attainments.

But we shall say no more at present on this subject, and content ourselves with reiterating the opinion, that the present state of the profession renders the existence of quarterly, as well as of weekly journals, both highly desirable and necessary. We may quote, in conclusion, a note of Mr. Crosse's in which he has presented us with an enumeration of the medical journals published in Europe and America.

"In Great Britain, exclusive of strictly popular works, such as *The Doctor*, *The Gazette of Health*, &c. we have now *seven* medical periodicals, *three* of them issuing quarterly, *one* two-monthly, and *three* weekly. An ophthalmic journal has just been proposed by Mr. Middlemore; a journal devoted to midwifery and the diseases of women and children, such as has long proved successful in Germany, would, I conceive, embrace a more extensive field, and have a better chance of success; or a separate journal of pharmacy, &c., such as exists in France, Italy, and Germany, and even in America. In the United States of America, as many as eighteen distinct journals upon medical science are enumerated at the present time, issuing at Philadelphia, New York, Boston, Baltimore, Charleston, Cincinnati, and Lexington; and a writer observes that, owing to such channels of information, 'each member of the profession, however remotely located, may now be placed in almost immediate possession of all the important contributions made to our science in every part of the civilized world.' Turning to France, we find nearly *twenty* periodicals upon medicine and its collateral branches; about *fifteen* of these issue from the press at Paris, and are republished in a monthly volume at Brussels, under the title of *Encyclographie des Sciences Médicales*. Belgium has two journals. Seven medical journals, including those of a popular character, were continued in Holland during the last year, the titles of which have been furnished me by Dr. Nieuwenhuys. In Denmark we learn from Dr. Otto that there are three journals; and in Spain there are two. Those published in the Italian language amount to nearly *twenty*, the principal amongst them issuing at Milan, Bologna, Venice, Pavia, Naples, Rome, Turin, Palermo, and Verona. In the German States, and in the German language, *forty-five* journals on the different branches of the medical sciences were actually sent forth in 1835, as I am informed by Dr. Bluff, who has so repeatedly favoured me with information; this is an increase of *five* compared with the preceding year: the demand for so many channels of infor-

* The Lancet, some time ago, lamented that there was not a decidedly radical quarterly journal. It promised such a journal success. In this it displayed a striking ignorance of the principles on which a quarterly periodical can alone expect to exist.

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mation is increased by Scandinavian and Russian contributors and readers. After much enquiry under favourable opportunities, I find reason to believe that the extensive territory of Russia has no native medical journal or review, but is supplied from Germany and other countries. The recent increase of medical journalism is indicated in the East Indies, in the West Indies, and in South America."

This Retrospective Address of Mr. Crosse is highly creditable to his good feeling, his good sense, and his research. It will repay any one amply who peruses it.

ON TIC DOULOUREUX, OR NEURALGIA, TOGETHER WITH A FEW CURSORY REMARKS ON INTERMITTENT FEVER AND ITS SUPPOSED CONNEXION WITH THE FORMER. By JAMES HEYGATE, M.D. M.R.C.S.L. &c. and Physician to the Derbyshire General Infirmary. Octavo, pp. 64, sewed.

THE author observes in his preface, that—"the fact that severe facial tic douloureux often originates in organic disease of the head, seems to have been scarcely ever entertained." This, we think, is rather premature. Sir Henry Halford relates several cases, where the disease originated in the head—and, among others, that of the late Dr. Pemberton, where, besides unusual thickness of the os frontis, there was found an osseous deposit in the falciform process of the dura mater, with marks of cerebral irritation and inflammation in the neighbourhood. In stating another case, Sir Henry observes:

"The head was opened after death, and an enormous thickening was observed of the frontal, ethmoidal, and sphenoidal bones, in one part to the extent of half an inch; and the anterior lobes of the brain were curiously moulded and indented by the thickened bone. There was thickening also of the whole of the cranium, but not to so great a degree any where as in the parts which have just been named.

Thus we have a demonstration of *a bony deposit proving a cause of pressure on the brain and nerves, and from its situation this must have acted especially on the branches of the fifth pair.*"

Dr. M'Culloch, while tracing tic douloureux to malaria, considers that the cause makes an impression on the whole nervous system (including the brain, of course), though the immediate seat of the pain may be in one particular nerve. Those cases of TIC, which have persevered after the nerve was divided, or even the limb amputated, have been generally referred to the brain.

Our author's attention was particularly attracted to the present subject by a case, which is sketched in the pamphlet under review. He admits that many cases of the disease are dependent on functional derangement of the digestive organs—and that functional disorder in the head can seldom be discriminated from organic disease, till the former has made some progress.

The history and description of the complaint we shall pass over, as being well known to our readers. In respect to the causes, our author thinks that the *simple* cases are generally dependent on disorder of the digestive organs—the *severe*, on "some organic disease," as tumor, ulceration, spicula of bone pressing on the origin of the nerves. "In fact, any substance that presses on the nerves at their origins, or in their course, may certainly, by the irritation it produces, cause neuralgia at the ends of the nerves." A review of the treatment of neuralgia is taken by our author; but we must also pass this over, and come to the case which gave origin to the pamphlet.

Mrs. B. aged 53, had laboured for some time under ophthalmic inflammation, unaccompanied by pain, and reluctantly giving way to the usual remedies. She afterwards became affected with pain in the left side of the head, over the temple. It was slightly mitigated by bleeding, blistering, &c.; but, after some weeks, it assumed the character of "FACIAL TIC DOULOUREUX." At first, the attacks were preceded by a rigor, occurring every evening about six o'clock, and generally lasting till

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two o'clock in the morning. The pain was chiefly in the course of the supra-orbital nerve. The periodical character, however, was subsequently lost, and pains extended over the cheek-bone to the nose and lip, shewing two branches of the fifth pair to be affected. The pain was very intense, and the line of demarcation between the nerves of the two sides of the face was clearly defined. Numbness extended to the left half of the tongue. Dr. Robertson, of Northampton (one of the most talented physicians in England) was consulted, and assisted with his able advice. The auditory nerve became affected, and the digestive organs deranged. Little benefit was derived from any plan of treatment, and our author began to suspect some organic disease at the origin of the nerves in the brain. Opiates, internally and externally, were the only remedies that mitigated the severity of the pains.

"After suffering for about 4 months in this way, it was perceived that the left eye-ball began by degrees to protrude, till it was pushed out to a very considerable extent. Whilst this was going on, the power of vision in this eye became completely lost, as well as the ability to move it. Then followed at first in a trifling degree, and afterwards more and more profusely, an acrid discharge from the left nostril, of a very offensive nature. It was now clear that there must be ulceration, and, from the nature and seat of the pain, it was reasonable to infer that this ulceration was seated where the nerves supplying the head and face make their exit from the brain. Mrs. B. gradually lost the power of mastication, and her speech became also very indistinct. During this time it was obvious enough that diseased action was extending its ravages;—the glands on each side of the neck became enlarged, and ultimately encroached on the œsophagus; so much so, as to render the passing of fluids only allowable.

After the discharge from the left nostril had continued, and increased in offensiveness, for about three months, bloody matter began to flow from the right nostril also, and the sight of the eye on that side gradually diminished, till at last she could not distinguish any person or object, however closely presented to her view. Thus things went on from bad to worse—the tumours in the neck increasing, the distortion of the features becoming greater, the spasmodic pains, remarkably acute, had reached the right side of the face also; inability to raise herself in bed, and amazing prostration of strength."

"She became extremely emaciated, and after suffering the most excruciating agony, with exemplary patience, and with only short intervals of ease, for upwards of a year, she was seized with a diarrhœa, which had frequently before threatened, and which now terminated a most deplorable state of existence."

Post-mortem Examination.

"On dividing the dura mater, and gradually lifting up the brain, I discovered a tumour (which I have preserved in spirits) at the base, about the size of a pullet's egg, resting partly upon the left crus cerebri and tuber annulare. On cutting into the tumour, it appeared of a hard, white cartilaginous consistency. The surface of the tumour on the fore-part was ulcerated, as were the parts of the ethmoidal and sphenoidal bones adjoining.

The great pressure produced by this extraneous body on the left optic nerve, accounted for the loss of sight in that eye. Ulceration had likewise extended itself along the course of the optic nerve, and matter was found seated behind the eye-ball. This accumulation accounted for the eye-ball being protruded. Ulceration had also extended itself to the right optic nerve, and, from the pressure of the purulent matter which surrounded the nerve, we may account for the sight of that eye, in the latter part of the illness, giving way.

The scalpel, through the ulcerated parts, passed very readily into the nostrils and left eye-ball. There was more water in the ventricles than is usually found. No other deviations from health were observable in the brain. The abdominal viscera were not examined, neither was the structure of the glandular enlargements in the neck. Fur-

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ther dissection was omitted out of delicacy to the feelings of the surviving friends. I do not, however, consider it would have thrown any additional light on the case."

We consider Dr. Heygate's case as the most valuable part of the work, because it adds a very valuable item to the pathology of a most formidable and agonizing disease. Dr. H. corroborates the opinions of a distinguished physician—Sir Henry Halford—and he refers to authors, who are well known in Modern Babylon to be somewhat *apocryphal*. We return thanks, however to the author for this contribution to medical science.

THE BRITISH MEDICAL ALMANACK, 1837. Edited by WILLIAM FARR. 12mo, pp. 215. Price, with the Supplement, three Shillings; or bound and gilt, with Writing-paper to record cases, five Shillings.

This little book is a symbol of the times, the active, stirring times we live in. Every class of people has now its appropriate almanack, that is, a calendar useful to all, and the particular information required by itself. There is the commercial almanack, full of money matters—the clerical almanack, which talks of fat prebendaries and golden sees—the comic almanack, for those who like fun—and before us is the medical almanack.

The nature of its contents may be gathered from the following table, which we extract. It treats successively of—

"The Calendar.
A Chronological History of Medicine.
LONDON.—The College of Physicians; the College of Surgeons; Apothecaries' Company; Licentiates and Graduates, 1835-6; Medical and Scientific Societies; Benevolent Societies; Table of Meetings of Societies; Medical Department of the Army; Medical Department of the Navy; a Tabular View of the Medical Schools; Fees; Days and Hours of Lecturing; Hospitals; Table of the Fees; Infirmaries; Dispensaries; Museums; Libraries; Universities.
Provincial Medical and Surgical Association.
Prov. Hospitals; Societies; Schools.
EDINBURGH.—University; Colleges; Societies; Infirmary; Dispensaries.
GLASGOW.—Medical Institutions.
ABERDEEN and ST. ANDREW'S Universities, &c.
DUBLIN, CORK.—Medical Institutions.

SUPPLEMENT.

The Rise and Progress of the Provincial Medical and Surgical Association.
Statistics of Mortality and Sickness. By T. R. Edmonds, Esq. B.A.
Weight of the Human Body and Brain at all Ages.
Practice of the 14 principal Hospitals in England respecting the Post-mortem Examination of Patients.
Weights and Measures.—Comparison of Foreign with London Apothecaries' Weight.
Auscultation and Percussion.
Formulary of New Medicines.—(Magendie's abridged, with many additional substances.)
National Statistics.
On the Mortality of Officers in the English Army; the Influence of different Months on the Mortality: by Lieutenant Tulloch.
Description of a Wet Bulb Hygrometer, by J. A. Mason, M.D. (with a Plate).
Statistics of Hospitals.
Table of the British Hospitals.
Acts of Parliament.
Miscellaneous Articles."

Before we say any thing in praise of the Almanack, we must point out a very gross fault in it. If there is any body who has no business with politics, it is surely an almanack-maker. His business is to record facts, not to pester his readers with his political lucubrations. People buy an almanack as an almanack, not as a party-paper; if they find it such, they have great reason to complain of being cheated, and the proprietors may be pretty sure that the aggrieved purchasers will not be duped again. The politics of the almanack may be good or bad—that is not the question. There ought to be no politics in it at all. Radicals are apt to think that there are no such folks as tories, and tories that there are hardly

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such canaille as radicals. It is very disagreeable for the one party or the other, on opening a calendar which they have unwarily bought, to find a blustering political adversary. That this fault is committed by the almanack-writer before us, will be evident from the passage we proceed to quote. It is contained in the introduction, a dogmatic and rather impertinent preface of three or four pages.

"On passing to the societies, the schools, and the hospitals in the country, it will appear that here also there has been progress. In his eloquent discourses on Medical reform, Mr. Lawrence had to inform the Council of the College of Surgeons that there were *Surgeons* and hospitals in the country; the College of Physicians had connaissance of none but a few gentlemen, whom it stamped as *Extra*—Licentiates in the land of utter darkness, seven miles removed from London. Such was the state of things not many years ago; now turn to the Almanack, of 1837, from Aylesbury, Bristol, and Bath, to York, and count the names of the men as much distinguished by useful labours, or as zealously striving in the cause of science as their most successful brethren in London. The metropolis always derived its strength and talent from the country; its advantages rest on the basis that it is nearer to all the remote parts of the kingdom than they are to each other; it is the centre of the empire, which places every town and province in communication with the rest. But the intelligence and the power of the Medical Profession can no longer be circumscribed by a line drawn seven miles round—the London circle must extend to the shores of these islands."

All this is very true, and our readers know that the passage represents our own sentiments. But it is utterly out of place, and although there are many who entertain these sentiments, there are many, also, who will think themselves snubbed by such remarks. If the publishers regard their own interests, they will alter this hereafter. An almanack is not a journal.

We concur in the following observations, which are, in fact, an echo of our own often-expressed opinions. But there is an unpleasant pertness in their tone, as, indeed, there is in too many passages. They remind us of some observations by Mr. Edmonds himself in the Lancet, which were characterised by a degree of brusquerie and egotism, totally out of place in a paper on statistics.

"The statistics of mortality and sickness form the basis of medical science. Without a knowledge of the laws of mortality and disease on a large scale, and without being well versed in the methods by which they are deduced, the physician practises unguided by the light of general principles, which, even in individual cases, should never be forgotten. The application of the Constant—discovered by Mr. Edmonds in investigating the rate of general mortality—to the sickness and the fatality of attacks at each age, is one of the most important accessions lately made to pathology. Numbers, although they have contributed so much to the progress of other sciences, have been very sparingly applied to medicine. This is partly the fault of the schools. Mathematics were cultivated in the English Universities, but their application to the natural sciences was not pointed out; and the abstract principles escaped from the mind. Mathematics did not form a part of the studies at the Scotch Universities, where a majority of the English Physicians were educated; and in London these principles are still neglected for Latin,—an instrument of insignificant importance when weighed against the elements of arithmetical science. A good authority stated, that there were four members in the *unreformed* House of Commons who, on an emergency, could convert a vulgar into a decimal fraction. The mathematics of our presiding bodies are, we hope, in a more flourishing state. Medical statistics, at present, only require a knowledge of the simplest rules of arithmetic; but the applied mathematics would be an excellent substitute for Latin in the examinations."

The defects in the Almanack can be easily removed. Let the Editor hereafter avoid any political allusions, as he

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would a tub of aquafortis, and let him shake off that positiveness of manner which is at present disagreeably perceptible. There are some errors of fact. The School of Anatomy of St. George's Hospital is put in Grosvenor Place. The Hospital Prospectus shews that it is in Kinnerton Street.

Of the execution of the remainder of the Almanack we can speak in very favourable terms. The chronological history extends from the year 600 A.D. to 1658. There is much in it to interest and to instruct. The statistical papers are worth reading, and we shall notice them more particularly in our clinical department. We shall conclude this notice by extracting a summary of some observations made by M. Quetelet, in Belgium, on the weight of the human body at different ages. The table, which we need not insert, shews:—

1st. That the weight of the male infant, at birth, is nearly 7lbs. avoirdupois; while that of the female is not quite 6½lbs.

2nd. That the maximum weight (140½lbs.) of the male is attained at the age of 40; while that of the female (nearly 124lbs.) is not attained till 50: from which ages they decline afterwards; the male to 127½lbs. the female to 109lbs.—nearly a stone.

3rd. That the full grown adult is twenty times as heavy as the new-born infant.

4th. That the rate of growth varies: in the first year, the child triples its weight; afterwards the growth proceeds in geometrical progression, so that if fifty infants in their first year weigh 1000lbs., they will in the second weigh 1210lbs.; in the third 1331lbs.; in the fourth 1464lbs.; the rate remaining very constant up to the ages of 11—12 in females; and 12—13 in males, where it must be nearly doubled; afterwards it may be continued, and will be found very nearly correct up to the age of 18 or 19; when the growth proceeds very slowly up to 40. The weight of any number of children between 2 and 9 years of age being known, their weight, the amount of matter they can incorporate in twelve months or two years may be calculated.

Of course such observations are imperfect, and must not be taken for more than they are worth.

We cannot shut the book without strongly recommending it to our readers. It is an useful, an instructive, and an amusing Almanack, and should be on the medical man's library table.

RECENT WORKS ON ANATOMY.

1. THE CYCLOPÆDIA OF ANATOMY AND PHYSIOLOGY. Edited by ROBERT TODD, M.D. Professor of Physiology and General Anatomy in King's College, London, &c. &c. Parts VII. and VIII.
2. THE HUMAN BRAIN, ITS CONFIGURATION, STRUCTURE, DEVELOPMENT, AND PHYSIOLOGY; ILLUSTRATED BY REFERENCES TO THE NERVOUS SYSTEM IN THE LOWER CLASSES OF ANIMALS. By SAMUEL SOLLY, Lecturer on Anatomy and Physiology in St. Thomas's Hospital, &c. With twelve plates, 12mo. pp. 492. London, 1836.
3. A PRACTICAL DEMONSTRATION OF THE HUMAN SKELETON. By GEORGE ELKINGTON, Demonstrator of Anatomy in the Royal School of Medicine and Surgery, Birmingham, &c.
4. ENGRAVINGS OF VARIETIES IN THE ORIGIN, COURSE, AND DISTRIBUTION OF THE ARTERIES; CHIEFLY FROM ORIGINAL OBSERVATIONS AND DRAWINGS, WITH DESCRIPTIVE LETTER PRESS. By ROBERT KNOX, F.R.S.E. &c. &c., and F. J. KNOX, Surgeon, Author of the Anatomist's Instructor, &c. Fasciculus I. One plate.
5. ANATOMICAL ENGRAVINGS. By JONES QUAIN. The Arteries.

It is with feelings of unmixed satisfaction that we see such works as the above on the science of anatomy issue from the press in this country. They exhibit the strong interest awakened in the profession, and the conviction that is entertained of the necessity of implanting an accurate knowledge of anatomical facts in the student's mind.

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Two of the works before us are possessed of great merit. The Cyclopædia of Anatomy and Physiology is highly creditable to its authors, and to the public taste. Mr. Solly's book is of a very philosophical character, and it too reflects credit both upon its author and on those who patronise it. The other works are of a different complexion, though all are good in their way.

The pages of a practical medical journal are not adapted for the analysis, nor indeed for the critical review of an elementary science of facts, like anatomy. Yet the advances which have lately been made in it, the light which has been thrown on physiology, and the growing taste for comparative anatomy, render a more extended notice than has hitherto been given by journalists, a tribute equally due to authors and advantageous to their readers. We shall take an opportunity, from time to time, of selecting such anatomical or physiological subjects as we think adapted for the purpose, and presenting a sketch of what is at this moment known of them.

The parts of the Cyclopædia before us commence with the conclusion of the description of the Cilia, and terminate with a paper on Death, by Dr. Symonds. That paper has been noticed in another place. The articles comprised between the first and last are—Circulation, by Dr. Allen Thompson—Cirrhopoda, by Dr. Coldstream—Cirronosis, by Dr. Todd—Conchifera, by M. Deshayes—Contractility, by Dr. Alison—Cranium, by Mr. Malyn—Regions of the Cranium, by Dr. Todd—Crustacea, by Dr. Milne Edwards—Cyst, by Mr. B. Phillips. The variety and importance of the subjects correspond to the high characters of the several authors, and, on the whole, we may very safely say that these parts maintain the high and merited reputation of their predecessors. That would be a poor medical library which wanted the Cyclopædia of Anatomy upon its shelves.

To give clearness to anatomical descriptions, and indeed to render the details of comparative anatomy intelligible, diagrams are absolutely indispensable. The publishers of the Cyclopædia have wisely and liberally illustrated the text with numerous woodcuts. The circulation of the blood in man and other animals is displayed in twenty diagrams, a judicious and economical profusion. One considerable element in the success of the Cyclopædia, is this abundance of drawings, and we would strongly recommend the proprietors to proceed as they have begun, and to spare no expense in the elucidation of minute points of philosophical and comparative anatomy by wood-cuts. Our present crippled space forbids our doing more than add, that, as this work has now arrived at its eighth number, and supported the promise that its early numbers gave, those who at first hesitated to purchase what might never be completed, need entertain no further scruples. It is a work which is peculiarly valuable to the student, because it gives him information that his means would forbid his otherwise obtaining.

The Description of the Human Brain by Mr. Solly is a work, excellent in its conception, and very meritorious in its execution. The time has come when a revolution must take place in the mode of teaching and of learning the anatomy of the brain. The method of slicing that organ to its base, though well enough adapted for the ordinary purposes of pathology, is absurd as a means of becoming acquainted with its healthy structure. That must be learnt by pursuing the fibres of which the cerebro-spinal system is composed, and by accurately studying their relations, and their distribution. When the student has grown conversant with them, a wider and a fairer field is before him. Beginning with the lowest class of animals, he traces, in ascending series, the development of the nervous system, and sees successively additions of new parts and of new functions. Nothing can be more philosophically beautiful than such a study. It amply recompenses him for the fatigue of acquiring the facts which he must do, to enable him to commence such a survey.

"By pursuing this course," says Mr. Solly, in his introduction, "we

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shall be rewarded by finding that the enkephalon, this apparently most complicated organ in the human being, is but a gradual development from an extremely simple fundamental type on one uniform and harmonious plan, and that the seeming complexity of the cerebro-spinal axis in man really arises from the great concentration, as opposed to the extreme diffusion of its component parts in the lower order of animals; for in no particular are the higher orders more strikingly distinguished from the lower than in the concentration of function within circumscribed spaces."

The plan adopted by Mr. Solly in the arrangement of his matériel is this. He first sketches the comparative anatomy of the nervous system. Commencing with the investigation of the nervous matter, he proceeds to investigate its forms. He views them in the articulata, the mollusca, and the vertebrata. Then he examines, and not in the old fashion, the human brain, the exact anatomy of which he describes. From the brain the transition to the cerebral nerves is natural and proper. The cerebral circulation next engages his attention, after which he treats successively of the development of the brain, of its physiology, and of the physiological inferences which may be drawn from its pathological states.

The execution of the work corresponds with its spirit. It is perspicuous in its style, and lucid in its descriptions. At present we can do no more than commend. At an early opportunity we shall give our readers an opportunity of judging whether our encomia are merited.

Mr. Elkington's practical Demonstration of the Human Skeleton is a very clear, concise, and good system of human osteology. He observes with much truth that there is now no good monograph upon the bones. Monro's is superseded by the descriptions contained in the more exact and elaborate systems of anatomy of Cloquet, Bourgery, &c. A gap then there was, and Mr. Elkington has filled it. We can recommend his book to students, and have no doubt, from its execution, that its author is a demonstrator, worthy of the Birmingham School of Medicine—no inconsiderable compliment.

We have spoken so often of Dr. Quain's Plates, that we hardly know what more to say about them. They are exceedingly well executed, and the only fault we find with them is, that there are not enough of them. We are sure the subscribers would gladly see the work extended, and a sufficient number of plates presented, to constitute a series as complete, at least, as that of Bourgery. This might be done by supplements, and we would strongly recommend it.

The engravings of Varieties in the Arterial System, published under the superintendence of the Knoxes, are deserving of encouragement. Anatomists, like other people, are too apt to become routinists, and to go on at a jog-trot pace, in the customary path. Yet it is of great importance, in a practical sense, to be well acquainted with the varieties in the origin and course of vessels, so peculiarly subjected to operations as the arteries. The present fasciculus displays the following arterial vagaries.

1. The external carotid artery proceeds *anterior*, instead of posterior, to the dygastric and stylo-hyoid muscles.

2. The axillary artery gives off an anomalous branch, which follows the course of the humeral artery, and at the elbow-joint is joined by another anomalous artery *from* the humeral. The vessel that results pursues the course of the radial, and is again reinforced by a large branch near the wrist.

3. The fibular artery nearly equals in size the posterior tibial, with which it coalesces between the internal malleolus and heel.

4. In the same limb, the posterior fibular branch was very small, and the anterior peroneal was an offset from the anterior tibial.

The Knoxes are ever anxious to enrich anatomical science, and we trust their efforts will enrich themselves. We shall notice future fasciculi, when they appear, and we can speak very favourably of this one.

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Spirit of the English Periodicals, and Notices of English Medical Literature.

Death.

There is a very good article on this subject of universal interest, in the eighth Part of the Cyclopædia of Anatomy and Physiology. There is no period of organic existence which does not fall within the sphere of medical investigation. We search with eager curiosity for the germ before it has been impregnated, and follow its subtle phases of development till it becomes a distinct object of sense. A living thing, it is continually under our inspection, every point of its physical structure is familiar to us, every function is curiously studied, and our great object is to prevent the occurrence of that event, which opens up new sources of scientific inquiry—death. Then come the anatomist and chemist, and how much of what we know respecting the living is drawn from our researches on the dead.

We do not intend to follow Dr. Symonds through his dance of death. Not that it is wearisome—far from that. But many of the steps are familiar, and the whole figure would be much too long. We will only select one or two of its parts, which may amuse or instruct the less severely practical portion of our readers.

Death, Dr. Symonds tells us, and we know it well, is a complex phenomenon. Absolutely, it is the total and permanent cessation of all the vital operations. But what the vulgar generally term death, is not death in so exact a sense. When consciousness, respiration, and the circulation cease, the individual is dead to the world. But some organic operations may go on for a season, the vermicular motions of the intestines may continue, the nails or beard will grow—and some vital properties are not yet extinguished, as the irritability of the muscular fibre, on the application of a stimulus.

The medical philosopher observes this distinction, and divides death into,

1. The cessation of certain functions of certain organs associated together to constitute a system; in other words, the arrest of circulation, respiration, innervation. And—

2. The cessation of the vital properties of the tissues themselves, and of actions which go on between their particles, as nutrition and contraction.

This latter is molecular death—the former is christened systemic. A very little consideration of both will inform us:—1st, That molecular does not necessarily involve systemic death, unless the former is universal. 2dly, That when partial, as in mortification, the tendency of molecular to induce systemic death depends on the importance of the part to the whole. 3dly, That molecular death in one part can only induce the same change in another part, by means of its interference with one of the systemic functions. 4thly, That systemic death must necessarily be followed sooner or later by molecular death,—but that, 5thly, The reality of systemic death can only be proved with certainty by the occurrences pertaining to molecular death.

The imperfection of our philosophical language is always evident, when we speak of the more subtle vital phenomena. Dr. Symonds, for example, starts on the pursuit of molecular death, with the dogma that molecular life is constituted by two functions—nutrition and contraction. The term contraction is inadequate to express both the fact itself and our knowledge of it. If we examine the living muscle, we observe that it undergoes incessant changes which we term nutrition, and that it displays certain properties which we call irritability *or* contractility. If we turn to the osseous tissue, we see the same process of nutrition, but contractility in its obvious sense is lost. Even the animal basis of the bone fails to display the species of contraction that the muscle did, and the physiolo-

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gist, finding distinctive phenomena, is compelled to employ terms which indifferently represent them. Sensible and insensible organic contractility are the exponents of vital actions, which are not contractions in its ordinary sense. But this is a digression, and we proceed.

Nutrition implies a mechanism or tissue of pores or infinitely minute tubes, the ingress and egress of fluid, and a certain quality of this fluid. Contraction, a fibrous arrangement of particles, in most animals, and in all a peculiar property called irritability or contractility. The violations of these conditions are necessarily followed by molecular death.

If nutrition be the property of the tissue, it follows logically, as in fact, that the destruction of the tissue is the destruction of nutrition. Molecular death *must* result from it.

If nutrition depends on the presence of a fluid, which we therefore call nutritive, the absence of the fluid must prevent nutrition. Such is the fact. Tie a hæmorrhoid so as to prevent blood getting into it, and it will inevitably die. That is mortification, and mortification is partial molecular death, its distinctive characters being the consequence of the persistence of life in other parts.

It is not so obvious at first sight, that retention of the fluid in the tissue must destroy nutrition. To make this a palpable consequence, another premiss is requisite. It is this, that nutrition implies not merely the presence of a nutritive material, but the more or less frequent renovation of it. That being granted, we no longer wonder at the retention of the fluid preventing nutrition, and so occasioning molecular death. It is a fact that it does so.

"Removal of the effete fluid is provided for in the Porifera by ejects; in the Polypifera by expulsion from the central cavity and by transpiration; in the Acalephæ by anal apertures; and in vascular animals by vessels especially appropriated to the purpose, by transpiration, and by various excretions. This condition of molecular life is less easily violated than those already spoken of, because the modes of fulfilling it are more numerous. This is equally true whether we speak of the simple animal forms, or of the tissues of the more complicated; mortification is less frequently the result of venous than of arterial obstruction. Unquestionably turgescence and inflammation may ensue from the former, and may terminate in gangrene; but it is far more common for the part to be relieved by the excretion of various fluids, constituting hæmorrhage and dropsy, until new channels are found for the returning blood. Hence it appears that a redundance of fluid is less dangerous to organic structures than a deficiency."

That nutrition should be impaired or put a stop to by the depravation of the nutritive fluid is natural. That deterioration may be the result of imperfect respiration, of bad or scanty alimentation, or of insufficient or excessive excretion.

So much for molecular death from privation of nutrition. It results also from the deprivation of irritability, but it is questionable whether the two cases are analogous. The argument would be too long and too metaphysical for us just now; we therefore waive it. Irritability is at all events a primary function of the tissue, and its destruction implies an essential alteration of its state. Such is the matter of fact view. What is that alteration of state? We do not know. When the fibre of the muscle *ceases* to contract on the application of galvanism, we detect no change from its condition half an hour ago, when the irritability was perfect. The property appears to be exhausted, and that is all we ascertain. It is, indeed, though Dr. Symonds would seem to lean to a more flattering conclusion, an ultimate fact. Irritability is in the same category, quoad its nature, as sensation or volition. The former is the property of a fibre—the latter of the medullary matter. To be sure, one is more obviously physical than the others are; but, so far as our comprehension of all goes, they are ultimate facts. We only know that the brain sees, or smells, or wills—and we only know that the fibre contracts. The how and the why

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are beyond our reach. We may study the laws of the fact, though we do not know its essence or its causes. What tends to destroy irritability?

"Irritability may be destroyed by substances, either applied directly to the part or acting upon the general system. Thus, the fibres of the heart may be paralysed by a solution of opium injected into its cavities, or by essential oil of tobacco given by the mouth. Lightning annihilates the property all over the body. The motions of Infusoria may be arrested by a shock of galvanism, by solutions of opium and camphor, and by the vapour of sulphur. Arsenical preparations have a similar effect. The contractions of capillary vessels in the higher animals may be arrested by a certain description of injuries of the brain and spinal marrow."

Such is Dr. Symonds' account of molecular death. It is the deprivation of the molecular properties. That which is most striking as a molecular function is irritability—that which is most obvious in molecular death is the loss of it.

Systemic death, the destruction of the functions of the organs of assimilation, of the organ which circulates the nutritive fluid, of the organ which vitalises by aerating that fluid, and of the apparatus which feels and wills consciously or instinctively—in other words, the cessation of the operation of the heart, the lungs, and the nervous system, next comes under consideration. Dr. Symonds considers the causes of systemic death under the general head of syncope.

Of syncope he admits eleven forms, determined by its active causes. They are:—

Syncope by asphyxia.
Syncope by nervous lesions.
Syncope by injuries of the heart itself.
Syncope by injuries of other organs and tissue.
Syncope by mental emotion.
Syncope by hæmorrhage.
Syncope by poisons.
Syncope by cold and lightning.
Syncope by inanition.
Syncope by disease.
Syncope by old age.

A very coarse arrangement, and constituting, philosophically speaking, little better than a tangled coil. In examining these different sections we have repetitions of the same phenomena. Thus the syncope by disease or by poisons, may comprise every possible variety of syncope, considered in reference to its more immediate cause. It is clear that it has not been Dr. Symonds' object to analyse and reduce to their essential modes the varieties of death, but simply to consider the different forms of it as we see them on the surface. We should have preferred the former and the more scientific plan. We would have looked at death, as its commencement and its actual cause are to be found in the nervous system, or in the heart, or in the lungs. The variety of accidental modes tends only to distract and to confuse.

The sole point to which we shall advert in this long array of many kinds of syncope, is the syncope by nervous lesion. Our notions of the functions of the nervous system are unsettled. We have not yet arrived at an agreement upon what we do know. As we observed in our last number, men have been collecting the facts so busily, that they have not yet had leisure to reason very soundly on them. The comparative anatomy of the nervous system has not yet been properly worked out. The uncertainty in which we are at present with respect to the connexion between the brain and spinal marrow, and the functions of circulation and nutrition is to be lamented. Will the following quotation clear up the *alliance* of the brain and heart? We fear it does little more than add a smooth word to our vocabulary.

"But while there can be no question that all the organs are more or less related in the manner above indicated, it is not less evident that the connexion between some is of a far more intimate nature than between others. It is almost needless to instance the brain and the stomach, the brain, spinal marrow, and the heart, the heart and every part of the system, &c. &c. By overlooking the sympathetic relation between the brain and the heart, Bichat fancied that

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when he had proved the functional independence of the latter organ, he was compelled to search in some third part for the link between the death of the one and that of the other. It cannot be denied that in a large proportion of cases, the syncope which follows lesions of the cerebro-spinal system, is not a direct consequence, and that there is an intermediate suppression of the function of the lungs,—that in other words the syncope is the effect of asphyxia. (see ASPHYXIA.) It is somewhat remarkable that the illustrious physiologist just mentioned should have forgotten certain pathological facts which afford convincing evidence that cerebral injury may produce death without developing the phenomena of asphyxia; the 'apoplexie foudroyante,' for example, and the concussion of a blow or a fall. Nor is it less surprising that in his numerous experiments upon animals he should not have noticed what was afterwards fully demonstrated by Legallois and W. Philip, that both the heart and the capillaries may be immediately paralysed by violence done to the brain and spinal marrow. It must be remembered, however, that this result is much affected both by the extent and by the nature of the injury. Thus the brain may be sliced and the spinal cord divided, with no other influence upon the circulation than that which depends upon the interference with the respiratory actions; but laceration or crushing of the cerebral matter is immediately felt by the heart and capillaries. In these cases the circulation ceases, not because the cerebro-spinal axis takes any part in that function, but because it is connected with the heart in the same manner as we have stated that all the parts of the body are more or less connected,—in bonds of *alliance* though not of *dependence*. We have reason, however, to believe that the intimacy of the alliance between the brain and the heart is scarcely equalled by that of any other organs in the system."

We pass to the signs of approaching death. They possess a melancholy interest to the physician. To the vulgar they have always been matters of high import. The mystery that surrounds the future state of the *body*—its equally mystical connexion with the soul—have led men in all ages to attach an importance to the act of dying, which, philosophically, perhaps, it does not merit. The sad sarcasm of Rochefoucault is probably too true—that "most men die because they cannot help it," and just as such persons may be supposed to do. When consciousness is retained late in individuals of an intellectual character, there is a majesty in death even beyond what life can offer. Who does not recollect the imperial death of Trajan? "Raise me. An Emperor should die standing." Who can smile at the concluding moments of Rabelais? His last word a joke. Nowhere are the sweetest traits of humanity so conspicuous as on the dying man's bed—nowhere are the furies which Providence has made to dwell in the bosoms of the bad, so potent and so hideous. Yet, after all, the practical physician must confess, that the instances in which intellectual vigour does really remain to the last moments of existence are comparatively few. He must own too with a sigh, that the dreams of retribution on the death bed, are too frequently dreams only; and that the good and bad, the sinner and the sage, often die in precisely the same manner—the manifestations both of intellect and conscience being regulated rather by the nature of the malady, and by the *mode* of death, than by moral reflections on past life and conduct.

"The delirium of the dying is often of a most interesting character, and resembles dreaming more than any other form of derangement that has fallen under our notice. The ideas are derived less from present perceptions than in insanity, and yet are more suggested by external circumstances than in the delirium of fever and phrenitis. Thus the sight of a bystander often suggests the image of a friend long departed, in which character the moribund man addresses him, and talks earnestly of persons, scenes, and events belonging to a former period of his history as if still present. The vivified conceptions are generally derived from subjects which, either in his speculative pursuits, or in

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the business of life, have principally occupied his thoughts. The last words of Dr. Armstrong were addressed to an imaginary patient upon whom he was impressing the necessity of attention to the state of the digestive organs. We have heard that a great legal officer not long deceased, having raised himself for a moment from his couch, said with his wonted dignity, 'Gentlemen of the Jury, you will find,'—and then fell back on his pillow and expired. The visual conceptions reproduced in some minds often appear to have been derived from poetical reading. We remember hearing a young man, who had been but little conversant with any but civic scenes, discourse most eloquently a short time before death, of 'sylvan glen and bosky dell,' purling streams and happy valleys; 'babbling of green fields,' as if his spirit had been already recreating itself in the gardens of Elysium. It not unfrequently happens that the spectra owe their origin to contemplations of future existence; and, consequently, that the good man's last hours are cheered with beatific visions and communion with heavenly visitors.

'Saw ye not even now a blessed troop
Invite me to a banquet, whose bright faces
Cast thousand beams upon me, like the sun?
They promised me eternal happiness,
And brought me garlands, Griffith, which I feel
I am not worthy yet to bear: I shall assuredly.'
King Henry VIII. *Act* iv. *Sc.* 2."

"One of the most curious instances of derangement that we have met with occurred in a phthisical patient. It consisted in a morbid association of ideas by mere similarity of verbal sound, or in other words a propensity to rhyme. Every person who came to the bedside was sure to receive a distich in honor of his name; nor could any remark be made in his presence without his seizing one of the words uttered and finding a rhyme for it, in doing which he exhibited great ingenuity. We were unable to ascertain whether he had been addicted when in health, to attempts at metre. Recitations of poetry, appearing to recur from a passive process of memory, with perfect unconsciousness of what is passing around, are frequent occurrences; and the passages selected have often a singular coincidence with events in the life of the moribund rehearser. Sir W. Scott's touching picture of the death of Madge Wildfire has had many unfictitious counterparts.

Dementia or imbecility sometimes comes on a short time before death. It is for the most part manifested by an incapacity of concentrating the ideas upon any one subject, and by an all but total failure of memory. The study of the degree of this condition necessary for invalidating a legal document is of great importance to the medical jurist. The mental weakness is in no respect so painfully exhibited as in the facility with which the subject of it derives pleasure from puerile amusements. 'Playing with flowers' is a token of approaching dissolution enumerated by a dramatic author, one whose observation pervaded human nature in all its phases. We remember visiting a lady in the last stage of a urinary disorder, during the progress of which she had evinced both strength of mind and refinement of taste:—We found her arranging with great care, and with demonstrations of delight at her success, a garland of flowers around a chamber utensil. A more humiliating spectacle could scarcely be witnessed. We augured that her decease was near at hand, and she died on the following day."

There are several phenomena displayed by the dying, which have always attracted the attention even of ordinary observers. The typhoid patient is observed to catch at minute objects in the air. There can be little doubt that the spectra are either the result of the state of the circulation in the eye or optic nerve, or of the inspissation of secretions on the cornea. Whatever the cause in any particular instance may be, in the great majority, it is certainly physical.

Picking at the bed-clothes, or, as Dame Quickly calls it, "fumbling with the sheets," is another notorious sign of coming dissolution. Dr. Symonds supposes that it depends on the revival of tactual sensations. We have often watched the dying patient engaged in this operation. In many instances it has seemed to us, that it was the vision which was false, rather than the tactual sense. We have seen the eye fixed on a portion of the coverlid, and gazing vacantly, but intently, on it, the fingers

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have begun to fumble and to pick it. In other instances, the act has not corresponded with any apparent operation of sight, but, whilst the eyes were closed, or fixed upon the ceiling, the hand and fingers have been at work upon the bed-clothes. In such cases, the explanation of Dr. Symonds is probably the true one. A little reflection will prevent surprise at the exhibition of phenomena of this sort. When we contemplate the irregular states of circulation, and the influence which its irregularity always exerts on the nerves of sensation—and, when we couple with this the disturbed operations of the mind itself, independently of present objects of sense—when we allow, in short, for the operation of delirium and of physical conditions, we shall feel little difficulty in accounting satisfactorily for what we see.

It is a question in which we all experience a melancholy interest, whether the act of dying is painful. Reasoning, facts, all forbid us to suppose that the mere act is so. But the agony preceding death is, in many cases, not only shocking to the stander-by, but, if the expression of the countenance and the ordinary gestures of instinct and of passions be not altogether false, it is one attended with much suffering. No doubt, all depends upon the mode of death—upon the functions first impaired—upon the nature and duration of the syncope. It must, we think, have been generally noticed, that women die more tranquilly than men. The reason, perhaps, is not hard to guess. The physical struggle is not so severe, and the minds of the fairer and more amiable sex are less disturbed by religious doubts, and by reflections on former vices or crimes.

We need not follow Dr. Symonds through his enumeration of other and familiar signs of death. The muscular debility; the weakened voice—the rapid, feeble, or irregular pulse—the difficult respiration—the loss of animal heat—the altered or arrested secretions—the changed countenance, are all well known, and more or less easy to be understood. Yet there is one point on which we may pause.

"The moribund are often impatient of any kind of covering. They throw off the bed-clothes, and lie with the chest bare, the arms abroad, and the neck as much exposed as possible. These actions we believe to be prompted by instinct, in order that neither covering nor even contact with the rest of the body may prevent the operation of the air upon the skin. There are actions and re-actions between the air and the blood in the skin, similar to those which occur in the lungs, and hence, in asphyxial disorders, the symptoms alluded to are very marked; but the mere influence of the air upon the cutaneous nerves has been proved by Dr. Edwards to be beneficial to the vital powers. Certain it is, that these symptoms are sometimes prominent in cases where the respiration is very little involved in the mortal struggle. Orfila, in one of his cases of poisoning by sulphuric acid, mentions that the subject of it made constant efforts to remove even the lightest kind of covering."

We fear that it is problematical, whether the aëration of the blood upon the surface has any thing to do with this phenomenon. Dr. Symonds proves too much, when he shews that it is present in cases where the respiration is very little involved. What the skin does is as nothing, compared with what the lungs do; and, if the latter perform their functions pretty well, it is the most improbable thing imaginable, that Nature should struggle for the fraction of a fraction of assistance from the skin. It is much more likely that the tossing of the arms and disposition to throw off all clothing, depend on a certain inexpressible anxiety felt at the præcordia or the chest. In no disease is this so striking as in the epidemic cholera. Whilst the skin is blue, and clammy and cold, the patient struggles against the least clothing on the chest, or even on the limbs. We asked a patient in this state, what it was which induced him to expose himself. He answered only by putting his hand on the lower portion of the sternum.

The signs of actual death form the concluding portion of the article. Some of our readers may recollect a notice of a book of horrors written by a clergyman, Dr. Whiting, and quaintly in-

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tituled—"On the Disorder of Death." In that book Dr. Whiting has painfully collected all the most celebrated instances of vivi-sepulture, and conjured up such frighful images of live-burials, as make us afraid of *dying* for fear we should be *alive*. In this country, where the bodies of the dead are preserved so many days before interment, reason must admit that the chances of being "nailed down" in our narrow cell, before the spirit has quitted for ever its tenement of clay, are slight indeed. Yet the curious diligence of Bruhier has collected fifty-two cases of persons buried alive, four of persons dissected prematurely, fifty-three of persons who recovered without assistance after they were laid in their coffins, and seventy-two falsely reported dead.

The indications of death are arranged by Dr. Symonds under three distinct heads:—

1st. Signs of the extinction of vital functions and properties.

2dly. Changes in the tissues.

3dly. Changes in the external appearance of the body.

1. The cessation of respiration and of circulation is both theoretically and practically unable to afford us distinctive evidence. For we cannot appreciate their minimum compatible with mere existence. Few, perhaps, would choose to apply M. Foubert's test, to wit, that of making an incision in one of the intercostal spaces, and feeling the heart with the finger!

The loss of animal heat is obviously uncertain too. But the loss of contractility of tissue is conclusive. Galvanism, observes our author, affords a certain and ready method of detecting this property. According to the researches of Nysten* irritability is first extinguished in the left ventricle; after forty-five minutes it has left the intestines and stomach; a little later the bladder; after an hour the right ventricle; after an hour and a half the œsophagus; after an hour and three quarters the iris. It next takes leave of the muscles of the trunk, then the lower and upper extremities, and lastly the right auricle. The duration of contractility is shortened by a warm and humid state of the atmosphere, by ammoniacal gas, carbonic acid, and sulphuretted hydrogen. It is unaffected by carburetted hydrogen, chlorine, and sulphurous acid; nor is it found diminished in cases of asphyxia by strangulation and immersion. The annihilation of that particular kind of contractility of tissue, which is equally distinct from muscular contractility, irritability, and elasticity, is one of the surest signs of death. We see it wanting in the collapsed edges of a wound which has been inflicted on the skin of a dead body, as contrasted with the gaping appearance of a similar lesion made during life.

2. The first alterations in the physical properties of the solids after death are softness and flexibility, to which succeed sooner or later the opposite conditions of firmness and rigidity. The cause of the rigidity of muscles is uncertain and has occasioned much dispute. Some regard it as the last effort of vitality. Others look on it as analogous to coagulation of the blood, if not the result of its coagulation. Yet that coagulation has itself been deemed vital, or the active cessation of vitality. The fact is, that we know very little of the matter, and we therefore pass on. This rigidity is pretty certain evidence of death—the flaccidity that succeeds to it is quite so.

Putrefaction, genuine putrefaction—is an unequivocal sign of death. It must not be confounded, though it has been so, with sphacelus.

3. The state of the surface is the last to receive the attention of our author. There is nothing in his observations to arrest us. Yes, there is a short summary of the appearances displayed at different periods, which may lead us to guess with an approximation to accuracy, the period that has elapsed since dissolution. The summary in question is M. Devergie's.

"We may suspect that the body has been dead from two to twenty hours if there be flexibility, elasticity, heat, and contractility; from ten hours to three days, if there be rigidity of the joints,

* Recherches de Physiologie et de Chimie Pathologique.

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pitting of the soft parts, the natural colour of the skin, loss of animal heat, and no contraction under electric stimulus; from three to eight days, if there be flexibility (after rigidity) and no contractility; from five to twelve days, if the soft parts are puffed, elastic, and shining. After the twelfth day there is usually a separation of the epidermis, as well as a green tint of the abdominal integuments. But no certainty must be attached to these statements; they are merely approximative. The modifying influence of external media upon putrefaction is all but unbounded. In summer as much alteration may take place in five or six hours, as in eight or even fifteen days of winter."

We take our leave of Dr. Symonds. Though our parting is in death, it is not a very gloomy one, for the Doctor shews by the freshness of his intellects, that the signs of approaching dissolution are not to be looked for on him. Long may they be absent. The only fault we find with him is a crabbedness of style, which has latterly crept into our scientific writings. They have become a compound of French and English, wanting the sprightliness and vivacity of the one, and the manly terseness of the other. Our Encyclopædists write in an emasculated idiom, which reminds us strongly of the style of the Transatlantic Journalists. If we take up a number of the American Journal of the Medical Sciences, we are struck with the similarity. The reason is clear and the same in both cases. The study of French Medical Literature has generated this mongrel mode of writing. The French is the language of conversation. Even Madame de Staël scouted it as one of science. What then must this Anglo-Gallic tertium quid be? It came in with that pre-eminently dull book, the Cyclopædia of Practical Medicine. We wish we saw any probability of its going out again.

CEREBRO-SPINAL IRRITATION, CAUSING MENTAL DERANGEMENT, TRISMUS, AND PALSY.

An interesting case of this kind is reported by Mr. A. Cockburn, in our respected contemporary of the North.

Christina Ferguson, aged 25, had been labouring under an affection of the spine for nearly two years, being confined to bed, with little or no power of the lower extremities. Fourteen days previously to Mr. T.'s attendance (27th June, 1835), she was seized with convulsive movements of the muscles of the neck and lower jaw, ending in trismus. Issues had been applied to the spine, and various medicines had been taken internally, without benefit. She had been a long time hysterical, with constipated bowels, and irregular catamenia. She was pale, languid, with dull eyes, dilated pupils, pulse 90. Castor oil was given to open the bowels. On the 28th he did not see her. On the 29th he was surprised to find her out of bed, walking about the room, but quite maniacal. She tried to get out of the window, and became violent when coerced. She was confined to bed—her head shaved—cold lotions and blisters applied—brisk purgatives administered. 30th, still very violent—trismus continues—had antimony in full doses. There was very little abatement of the maniacal violence till the 12th of July when, being much exhausted, she fell into a sound sleep, and awoke free from mental derangement, and also from the recollection of any thing that passed during the preceding fortnight. On the 13th she again lost the use of her limbs. This state continued till the 27th, when she became again deranged, with restoration of power in the lower extremities. On the 4th of August she became quite collected. She could move her limbs in bed, but could not stand. On the 8th she could walk a little. On the 18th she was convalescent. She went into the country for some time, and returned quite well. The treatment consisted chiefly of extensive blisters to the head and spine, with strong purgation. Menstruation, which had stopped, was restored.

Dr. Craigie, who had seen this patient, has appended a long and erudite commentary on the case, which, though curious and interesting, is by no means singular. We apprehend that all we

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know of its nature or pathology may be included in a very small compass. Dr. C. thinks the phenomena, in the early part of the disease, at least, "proceeded from irritation of the spinal chord, or its envelopes, or, perhaps, to speak more to the fact, from a languid and inert state of the circulation within the rachidian vessels, and a consequent degree of congestion, which first irritated and then compressed slightly the spinal chord and the origins of the nerves." The whole of the phenomena, during the paralysis of the lower extremities, and afterwards when mania was present, he attributes to irritation rather than to inflammation. Although we are inclined to take the same view of the case as Dr. Cragie has done, we are by no means sure that either he or we are quite authorised to deny the existence of inflammation as an element of the pathological condition. The shifting of its seat from the spine to the brain, and *vice versa*, is no proof of pure and sole irritation. We think inflammation, as erysipelas, exhibit the same vagrant propensities. And, after all, what is irritation but a degree—perhaps the first stage of inflammation? This is all but admitted by Dr. Craigie himself, in his definition of irritation. It is, says he, "a state induced by stimuli or irritants, in which the natural properties are unduly and unnaturally roused—yet, without giving rise to the process of inflammation, *or the formation of morbid products.*" Now we apprehend that inflammation may, and does actually exist, in every case, before the "formation of morbid products"—and is very often quelled before these *consequences* ensue. A part is red, hot, painful, and swelled—exhibiting the real and essential characters of inflammation—and yet no "morbid products" are formed. And if this redness, heat, swelling, and pain be removed, without suppuration or effusion, are we to deny the existence of inflammation, and insist on the whole being *irritation?* We think that, in the case first detailed, it would be hazardous to aver that none of the elements of inflammation entered into the pathological condition.

Inversion of the Uterus.

The following interesting case has been transmitted to us by Mr. Bloxam, an active and a very intelligent surgeon at Newport, in the Isle of Wight. We feel great pleasure in inserting it.

To the Editors of the Medico-Chirurgical Review.

Gentlemen,—If a space can be afforded in your valuable pages for the accompanying case of inversion of the uterus, it may perhaps contribute somewhat towards a more thorough comprehension of this formidable complaint; the diagnosis, treatment, and prognosis of which, are yet involved in some degree of obscurity.

I am, Gentlemen, your obedient servant,

JOHN E. BLOXAM.

Newport, I. W. Oct. 3, 1836.

In July, 1835, my father and myself examined the uterus of a woman, whose health and strength were very much reduced by hæmorrhage from the vagina; this hæmorrhage had recurred, at irregular and uncertain intervals, for several months, being sometimes very profuse, and at others in moderate quantity, with a great deal of mucous discharge during the intervals. We found a tumor, of a rounded but elongated form, protruding from the os uteri about an inch and a half; it was decidedly larger in circumference towards its lower extremity than where it passed through the os uteri—its upper part or neck continuing to diminish in size as far as the finger could follow it; it bore handling and even pinching without pain; pressure with the nail occasioned some pain, but it was by no means so sensible as the os uteri; it was covered with a smooth, slippery, tense membrane; and was easily moved from side to side, but appeared to possess such a degree of elasticity as to sustain its own weight, without resting on the adjacent parts; the os uteri was soft, and allowed the finger to pass between it and the tumor, but not so far as to enable us to ascertain what sort of attachment it had to the uterus. We formed the opinion that the tumor

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was a polypus, and I believe that all the published accounts of the diagnostic symptoms of this disease, would justify the opinion. We decided upon removing it with the ligature, which was accordingly applied, by means of the canula, in the usual manner, and drawn quite tight. The operation appeared to give the patient but little inconvenience, and we left her a few minutes after; but in little more than an hour, we were informed that she was in a great deal of pain; we went to her immediately, and found her expressing, both by words and in manner, the most intense suffering—complaining of great pain both in the back and hypogastrium; indeed, although naturally patient and composed in her manner, the energy and wildness of her expressions gave her the appearance of a maniac: we removed the ligature, and she immediately resumed her usual composure, and declared herself to be in heaven. There was no return of pain, nor did any other unpleasant symptom appear.

We now made some further enquiries into the history of the case, and finding that the hæmorrhage had been recurring ever since her confinement, in January preceding; that she was then attended by a midwife; and that a profuse flooding took place soon after her delivery, followed by alarming faintness, which continued for many hours; we considered that, although these circumstances were all very compatible with the disease being a polypus, they confirmed the suspicion which the symptoms produced by tying the ligature had given rise to, viz, that the tumor was in fact an inverted uterus: we therefore examined the part in a different manner to what we had done before, and one which would probably always suffice for the diagnosis of these two complaints; we passed a ligature loosely round the tumor, in the same manner as we had done before, and then drew down the tumor by means of the ligature; the effect of this was, entirely to obliterate the passage which had existed between the os uteri and the tumor; the uterus being hereby completely inverted: the vagina, at the same time, was reflected upon itself, at its upper part, forming a cul-de-sac; and by passing the ends of the fingers into this, the absence of the uterus in its proper situation was satisfactorily ascertained. Either of these phenomena was, of course, sufficient to decide the nature of the case; and they were detected, in this instance, without either pain or difficulty.

The patient was a young married woman, the mother of several children; her health and strength were continually sinking under the effects of the injury; she was willing to submit to any thing, for the sake of her children, that was likely to prolong her life; we therefore determined, after explaining the risk and consequences to the husband, to remove the inverted portion of the uterus—which was nearly the whole of it—by means of a ligature.

Aug. 5th, 8, a. m., about a fortnight after the previous operation, we applied a large-sized cat-gut, (the base-cord of a harp,) round the narrowest part of the inverted organ, by means of the same sort of instrument we used before; the ligature was not drawn so tight as on the former occasion; it was only tight enough to occasion moderate pressure, which was done without much pain: in less than an hour the pain became severe, but by no means so bad as on the former occasion; an anodyne was given her, (morphiæ muriatis gr. ¼,) after which she became easier. In the evening there was increase of pain, heat of skin, and excitement of the pulse, which ranged from 95 to 100 throughout the day: the anodyne was repeated, and she remained easy till midnight.

6th. Obtained no sleep last night; a good deal of pain came on at midnight, which lasted for some hours; after this she remained tolerably easy, during the whole of the day; vomited several times. Morph. mur. gr. j. in the evening.

7th. Slept comfortably during the night; pain very trifling; looks cheerful; pulse from 100 to 105, with more fulness; skin soft, moist, and cool; tongue clean, nausea continues.

8th. Pain inconsiderable; appears cheerful; symptoms all favorable. The

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ligature tightened, by drawing down both its ends, and tying a piece of small-sized whip-cord round them, each end having a knot at its extremity, to prevent the whip-cord from slipping off; each end being thus shortened as much as the diameter of the whip-cord. After five hours of ease, the pain recurred with severity, extending down the thighs, and continued for three or four hours. Pulse not quite so frequent or so full in the evening as on the 7th. Morph. mur. gr. ½ at bed-time.

9th. Obtained three or four hours good sleep; no nausea; appetite improved; other symptoms the same.—Ligature shortened, in the same manner as yesterday. In the evening complained of a good deal of pain in the back, hypogastrium, and down the thighs. Morph. mur. gr. ½ at night.

10th. Had very little sleep, and suffered a good deal of pain during the night; complains this morning of pain in hypogastrium and thighs; pulse 120; in other respects doing well. Ligature shortened as before; after this the pulse regained its usual rapidity, (from 96 to 100);—appetite improving. Morph. mur. gr. j.

15th. Sleeps well, and has been almost free from pain since last report; symptoms all favorable. Ligature shortened in the same manner daily, but considerable force was required to render it any shorter to-day. Feels herself much improved in strength since the operation was commenced.

18th. Going on well. To-day, for the first time, we were unable to shorten the ligature.

19th. Ligature shortened again to-day.

21st. This evening the instrument came away, with the tumor attached to it in the form of a mere shred; the anatomical structure of which, however, could be made out without difficulty; the cavity of the uterus, the fallopian tubes, the mucous and serous membranes, could all be easily traced. On passing the finger per vaginam, no orifice, corresponding to the os uteri, could be found; a hardish body was discovered in the situation of the uterus, but which, at this time, retained none of the anatomical character of this part. On the 26th, however, the orifice and the two lips of the os uteri could be distinguished, but the os uteri would not admit the finger.

Sept. 27th, 1836. Her health and strength, which underwent considerable melioration during the first few weeks after the operation, have continued gradually to improve up to the present time. She has not been subject to any periodical pain or indisposition, nor has there been any discharge resembling the catamenia till about a fortnight ago, when a coloured discharge made its appearance, and continued to flow for a few days; it was small in quantity, and of a more florid colour than usual: this occurred a day after she had been a good deal agitated and alarmed by some information that had been communicated to her. She is subject to giddiness, nausea, and some hysterical symptoms, which she attributes to flatulence, has frequently slight pains shooting down the legs, and a pricking darting sensation in the breasts and in the genitals, which extends from the latter down the legs, and is sometimes so violent that she can scarcely refrain from crying out, though the sensation is not that of pain. She is more subject to lowness of spirits, more easily agitated and alarmed, suffers more from any thing that is calculated to frighten her than was formerly the case. She at one time suffered very severe pain in the loins for several hours, in consequence, as she states, of having been told that a house in the neighbourhood was on fire. She says she has suffered less from these affections, since the appearance of the coloured discharge. There is a sense of weakness and bearing-down, if the bowels become confined, if she attempts to lift any heavy weight, if she exerts herself in any manner long together in the erect posture, or if she places herself in a kneeling posture; these symptoms of local debility have, however, much diminished during the last two months. A daily, though not constant, discharge of mucus still continues in very small quantity. She has sexual intercourse with her husband, but it appears to be in

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some respect in an imperfect manner; she says, she does not *think* it can be possible for her to become pregnant. About six weeks ago, I had an opportunity of ascertaining the anatomical state of the parts, and found that the upper portion of the vagina, with the remains of the uterus, had descended considerably nearer to the os externum; the os uteri was very distinct, its lips were become very thin, and projecting considerably into the cavity of the vagina; the top of the finger was admitted into the hollow formed by the lips, beyond which there seemed to be firm and perfect union, but the strength of the union was, of course, not put to the test of much violence.

The details of this case appear to me to afford sufficient evidence, that the most eligible method of removing so large a portion of the uterus by ligature, forms an exception to a valuable rule. In removing parts of the living body in this way, it is generally important, to apply the ligature at once, as tight as possible; by so doing, the vitality of the part is at once destroyed; or, at least, sensation and all the functions of a living part are entirely suspended, and absolute death quickly follows. But the uterus is an organ, over which the nervous system exercises an especial influence; it is subjected, at times, to great mechanical pressure; and, either it is able to retain its sensibility and vitality under such a degree of constriction as would destroy these properties in other parts, or else we have no adequately powerful means of applying a ligature to the uterus; or perhaps there may be a combination of these two conditions. The functions, of the whole of the nervous system, are very much affected by the influence of mechanical pressure; and the effect produced by any alteration in the amount of pressure, is greater, the more suddenly the change takes place: although one degree of pressure shall produce symptoms comparatively trifling, and, at the same time abate, suspend, or entirely destroy many or all of the vital functions of the part concerned; yet a slighter degree of pressure will produce symptoms of the most violent and alarming character, and without obstructing the usual functions of the part: the difference in the two cases being that of annihilation, or great excitement of the nervous influence.

If the utmost pressure that a ligature applied to the uterus can accomplish, fall short of that which is requisite for cutting off effectually the communication which is carried on through the medium of the nerves, the proper practice then will be, to obtain that degree of pressure which is required, in the most gradual manner possible. It might be anticipated that such a method of operating, although productive of less pain, would be attended with greater danger, in consequence of its greater tendency to occasion inflammation; but the above case sets this point as well as the former one at rest, as perfectly as an individual case can do: there was some nervous disturbance and excitement manifested during the operation, but there was not at any time the appearance of any considerable inflammatory action; moreover, the uterus itself after its removal did not exhibit the slightest appearance of inflammation; the peritoneum, even where immediately pressed upon by the ligature, had not united; this membrane was not merely discernible, but it appeared quite uninjured, with its ragged edge, where it had separated just above the ligature, distinct; it was puckered into folds by the pressure of the ligature, and even these folds seemed to require delicate handling to prevent their obliteration.

The operation that I have detailed does not appear to be under any disadvantage, even as regards the length of time required for its completion; the whole process occupied 16 days and 12 hours, which is a shorter period, I believe, than is usual in the ordinary method of operating.

If I should ever perform the operation again, I would adopt some further precaution in order to lessen the constriction at the first application of the ligature; perhaps soaking the cat-gut in water previous to using it, would be the only precaution requisite. The material that we used has many advan-

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tages over any other, but it has these two defects; first, it is of too unyielding a nature; and secondly, it must be subject to some contraction after its application owing to the moisture of the parts; its want of suppleness prevents it from conforming to the shape of the part round which it is coiled, makes it more troublesome to apply, or occasions some degree of uncertainty in the degree of tension the loop may be in: by soaking the base cord of a harp in water, or putting it on the stretch by means of a suspended weight, for the purpose of rendering it straight or smooth, a ligature would be obtained combining every desirable property for this operation.

Spectral Illusions.

A gentleman in the law, aged about 34 years, and accustomed to live rather freely—namely, to drink a bottle of wine daily—sometimes more—fell and struck his head against a wall. He was slightly stunned, for a few minutes, but resumed his avocations. He was advised, however, to take some aperient medicine, and to leave off his wine. This he did. In a few days he began to be sleepless at night—this vigilance increased, and soon afterwards, while lying awake at night, he began to see figures moving about in his chamber. They increased in number, conversed, laughed, argued, and harangued upon all kinds of subjects, and were often highly entertaining. He generally took notes of the conversations, and some of them were very curious. One night there was a large company of choice spirits, and the subject was punning. They kept it up for some hours, and he wrote down several of the puns, some of which were by no means despicable. In a night or two after this, the scene changed, and instead of being amusing, the Dramatis Personæ became most disgusting and even horrible in their words and actions. The gentleman now took alarm, and applied to Dr. Johnson. He affirmed that these illusions were not dreams. He was wide awake all the time, and often noticed the conversations of the actors to his wife who slept in the same room. If he or his wife got up and opened the window-shutters, the illusions vanished.

On examination, this gentleman's head was found to be hot, the eyes red, the tongue furred, the pulse rather quick—in fact, he was feverish. It was also observed that his hands trembled, like those of a person labouring under delirium tremens. He was ordered to be cupped in the nape of the neck—to take saline aperients—mild diet—and to drink three glasses of sherry daily. It appeared to Dr. Johnson that this gentleman was affected by a kind of delirium tremens, caused by the sudden change from a bottle of wine daily, to water. It is also probable that some injury was sustained in the head by the blow. Opiates were not directed till the febrile symptoms subsided.

He soon recovered on the above plan, and has ceased to consult Dr. Johnson.

Case of Spectral Illusions. By Mr. Craig.

Since the foregoing case was written, the following very curious statement has been published in the Edinburgh Journal for Oct. 1, 1836.

A gentleman of great mental endowments, and master of 14 languages, then in his 76th year, began (1819) to have daily visitations of spectral images—at first occasional, afterwards more constant. In general, they presented human countenances and figures—the head and upper parts being much more defined than the lower. He rarely recognized any of his acquaintances.—The dresses were various, but generally antique, and consequently such as he had seldom seen, except in paintings. His own countenance was sometimes presented to him, gradually undergoing all the changes from youth to senectude. The figures were seen at different times in the day, and equally

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well when the eyes were open or shut. They were almost always of an agreeable character, and afforded a source of amusement. He had the power of calling them up, and of banishing them at pleasure. They were sometimes as large as life—sometimes much smaller. From the commencement of the spectral images, the gentleman continued his usual practice of taking little or no wine—if he transgressed, the number of images increased, and also their vivacity. They continued to recur for a series of twelve years, with very little change of character. His mental faculties appeared to be very little deteriorated—not more at least, than might be expected from age. When turned of eighty, he journeyed to London, "to dine with the Knights of the Bath," and returned by post at the rate of one hundred miles a day! He had now, when nearly ninety, great anxiety about a pension, the diminution of which was menaced!!!—His memory became very much impaired; but recovered to a considerable extent. When the cholera broke out in 1832, he was President of a Board of Health—and rigidly adopted the stupid rules of Cholera Boards in general. On the 21st August, 1832, while sitting at dinner, he lost the power of speech, but without loss of any sensorial power. A long detail of symptoms follows, which are little interesting. He was visited at various times by Mr. Liston, Dr. Abercrombie, Dr. M'Intosh, and others, who prescribed blisters, aperients and other remedies that seemed very proper.—When a little power of utterance was acquired, the language was a jargon of the 14 languages, which nobody could understand. Afterwards, however, he became more intelligible, and informed his attendants that the spectral images continued. One night he saw his wife traversing the room, and beckoning him to follow her. She had been dead many years. She seemed to glide out of the window, and through the same aperture he jumped out, and fell on the grass, from a height of seven feet and upwards. He got up immediately, and pursued the spectre through the conservatory and other places which had been her usual resorts. On being reminded that his wife was dead, he suddenly recollected himself, and mentioned the circumstance no more. He amended considerably, though he could seldom make himself understood as to his wants or wishes. His symptoms were invariably aggravated by disordered digestion or bowels. A question arose as to the sane state of his mind, and whether or not he was capable of executing deeds, &c. It was determined that, though he was unable to sign his own name, or give any intelligible directions, yet that he was of sane intellect. Mr. Craig's opinion was, that "his thinking faculty was quite correct, but the power of expressing it wrong." We believe that this definition of the nonagenarian's state was as near the truth as possible. His condition was nearly the reverse of the maniac or monomaniac, whose notions are wrong, but who is very capable of correctly expressing those notions.—From March till May, 1834, he went on rather improving. In the Winter of 1835, his pulse became much more irregular than usual, and dropsical symptoms appeared, with some difficulty of breathing. In December of the same year, he fell down stairs, and was found in a state of insensibility, but recovered sense, apparently from hæmorrhage, from a branch of the occipital artery divided by the fall. In March, 1836, he became affected with symptoms exactly resembling *delirium tremens*. He walked about for 36 hours incessantly, imagining that people were in the room and under the carpet. He took a large dose of muriate of morphia, slept for eight hours, and awoke in his ordinary state. In July, 1836, he caught cold, followed by considerable fever, which lasted nine days, and ended fatally, on the 15th July, in the 93d year of his age.

"The body was examined on the 16th of July, in presence of Dr. Abercrombie, Mr. Craig, Mr. Flockhart, and Mr. Comb.

In opening the head, unusually strong adhesions were found between the *dura mater* and inner surface of the skull,

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which was removed with much difficulty. The portion of skull-cap which covered the right hemisphere was of moderate thickness. Considerable effusion over the surface and between the convolutions of the brain, and great vascularity over the whole, indicating extensive chronic inflammatory action, especially in the course of the superior longitudinal sinus, where the *dura mater* was uncommonly thick.

The brain was examined by cutting thin slices from the surface downwards, commencing with the right hemisphere, which was found sound throughout, with the exception of a small tubercle, about the size of a split-pea near the surface, and similar to what is often seen in strumous children. The right ventricle was also sound. The left hemisphere was examined in a similar manner, and in the posterior lobe of the brain there was a cavity rather exceeding two inches in length, running obliquely outside of the left lateral ventricle, lined with a yellowish membrane, and the brain around its circumference was much softened. The cavity was close to, but not communicating with, the ventricle, which was sound.

The remaining part of the brain was then removed, and the base examined, which also over its whole extent bore strong marks of chronic inflammatory action. The internal carotids at the junction of the optic nerves were ossified. The base was then examined by cutting off slices. In the middle lobe, on the left side, a little behind the pituitary gland, and to the left of it, was a small diseased appearance, similar to what was in the posterior lobe, not exceeding a quarter of an inch in extent. No other diseased appearance except the increased vascularity was recognized.

The *cerebellum* was sound. On the posterior part of the *medulla oblongata* there was a small tubercle.

The thorax was opened. The right lung was found remarkably healthy; but the left lung adhering to the pleura. The substance of both lungs was quite sound. A good deal of fluid was effused both in the *pleura* and *pericardium*. The semilunar valves of the aorta were considerably ossified, and the *aorta ascendens* was enormously large, almost aneurismal, but sound in structure."

Dr. Craigie has appended a commentary on this case of no less than 14 pages. The commentary is learned, recherché, and, we think, judicious. We would only hint that it is rather prolix. He very properly remarks that "the appearances on dissection only disclose the ultimate effects of morbid action, while a thick veil is thrown over all the intermediate steps of the process." Alas! how applicable is this observation to the generality of diseases! Still, a study of this, and of every case, may lead to some practical conclusions, and advance, step by step, our imperfect science.

Dr. Craigie properly oberves that spectral illusions are sometimes owing to gastric irritation, especially in hypochondriacal patients—probably attended, at the time, with disordered circulation in the brain. In the case above related there can be little doubt that cerebral disturbance was the cause. The dissection proved this sufficiently; but had there been found no traces of *disease* in the encephalon, it would not have been a proof that no functional disorder had previously existed. The illustrations, however, which Dr. Craigie has appended, are important, and will well repay the labour of perusal.

Wound and Successful Ligature of the Internal Jugular Vein.*

This case occurred to Dr. Morgan, Professor of Surgery in Geneva College, New York. He has related it at considerable length in our American contemporary.

Case. The patient was a convict, æt. 25, confined for life in the Auburn State Prison. On the 31st of December he endeavoured to hang himself.

* Amer. Jour. of Med. Sciences, Aug. 1836.

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On the morning of the 1st of January, he cut his throat.

When Dr. M. was summoned to him, he found him lying upon a bed, exhibiting the most ghastly appearance; the bed on which he lay, and the floor about it were literally deluged in blood; and there was an incision about five inches in length, commencing near the sterno-clavicular articulation of the right side, following close upon the superior border of the sternum and of the clavicle of the left side for about three inches, continuing in its extent upwards and outwards. The wound had been plugged with pledgets of lint, before Dr. M.'s arrival. In removing the folds of cloth from the wound, a prodigious burst of blood followed, as if the carotid and jugular had both been severed. Pressure was immediately reapplied as well as possible over the bleeding surface, and in a manner that checked the flow of blood. The pulse, which was greatly reduced before from this tremendous gush of blood, sank to a flutter, and the patient swooned. Restoratives were twice necessary. The second time, while the patient was in the state of syncope, Dr. M. was enabled to tie the superior thyroid artery, which had been divided, and to ascertain that the internal jugular vein was nearly cut across. With a blunt aneurysmal needle, he passed a ligature from within outwards, about three-eighths of an inch above the wound, protecting the nerve and artery with his fingers, and aiding the passage of the needle through the sheath by a gentle motion of the intrument opposed to the nail of the index finger of his left hand. The needle readily passed, and the vessel was secured. But the patient coughed incessantly, and when he did so, the the blood retrograded in a full stream from the subclavian vein.

"The ligature which had been applied to the vein, was now handed over to my assistant, whilst I attempted to secure the lower portion of the vessel; this was a point of some delicacy. The cut having been made close upon the superior edge of the sternum and the sternal extremity of the left clavicle, further dissection became indispensable.

The vein being put upon the stretch by the ligature; with a delicate knife having a convex edge, I commenced my incisions upon the scapular side of the sheath, (making the index finger of my left hand the director,) and, by the most guarded dissection, succeeded in detaching the vein from its connexions for about half an inch below the superior edge of the sterno-clavicular extremity of clavicle: I then passed a silver-eyed probe, armed and bent to suit the situation, dawn upon the outside of the sheath, close upon the vein, until the end of the probe appeared opposed to the superior portion of the sheath between the artery and vein; by then scratching with my finger nail over the extremity of the probe, it readily passed. After being fully satisfied that nothing was included but the vein, I tied the ligature, and all hæmorrhage ceased at once.

In now examining the wound more particularly, I found the internal jugular vein divided in about three-fifths of its circumference, the external jugular and the superior thyroid artery completely divided; the sterno-cleido mastoid muscle completely, and the sterno-thyroid partially severed. The razor, in passing from right to left, laid the sheath bare, but did not sink sufficiently deep in its course to injure the coats of the artery, and yet left the free opening in the vein."

We need not particularise the method of dressing the wound, nor the subsequent diurnal reports. There is nothing of moment in one or the other. On the 6th day, the ligature separated from the superior thyroid artery. On the 7th the upper ligature came away from the vein; on the 9th, it was followed by the lower. On the 20th, he returned to tailoring, his usual employment: and we may trust that this convict will cut coats in future and not his throat.

"The cases recorded," says Dr. Morgan, "where the internal jugular vein has been successfully tied under any circumstances, are few in number. I know of but two instances in which this operation has been successfully performed in this country besides the case under consideration.

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One of these was performed by Dr. Stevens of New York, in 1830; the other by Dr. Gibson of Philadelphia, in Nov. 1832. In the last case, the ligature was applied in consequence of the vein being involved in a tumour, 'occupying the whole of the left side of the neck,' in the removal of which it became necessary to detach the vein, or secure it with a ligature."

New Kind of Truss for Prolapsus Uteri.*

Dr. Annan, of Baltimore, has published an account of a sort of truss that has answered very well in this unpleasant complaint. It is a modification of the Truss for Prolapsus Recti. We must therefore describe the latter first.

The upper part resembles the spring and main strap of a common double truss, wanting the pads, and is designed to embrace the sacrum and the wings of the ilia. Opposite the base of the lumbar vertebra, a curved spring is attached at right angles to the upper part, and after following the curve of the sacrum it terminates in a pad intended to act upon the anus. This rectal truss was modified thus by Dr. Annan.

"The truss, I have employed," we are at present speaking only of the rectum, "differs from the foregoing, in having a circular plate riveted to its centre, which has two narrow straps fastened upon it, under which the curved spring slides, and a small screw passing through holes, fastens it, so that by slipping it up or down the pressure upon the anus can be increased or diminished at pleasure. I also found it necessary to take the temper out of the curved spring, in order that the patient might bend it to any shape to suit the curvature of the sacrum. In consequence of this loss of elasticity, it had to be made somewhat stronger to make sufficient pressure."

Thus far he had modified the rectum truss, and thus he used it with much benefit in a case of polapsus recti. But we are to shew how he came to apply it to prolapsus uteri.

"Having at the same time a patient with the uterus in that state of descent which has been termed procidentia, on whom various pessaries had been tried, with temporary relief, but who, for a considerable period, had been unable to wear any of them, it occurred to me that the same instrument somewhat modified might answer for the support of the uterus. The first trial was made by lengthening the curved spring, so as to throw the pad forward in front of the anus upon the perineum. This gave some support, but was found to be extremely inconvenient in walking, and in sitting down was apt to pinch the nates, and she refused to wear it. It then struck me, that, by reversing the whole apparatus and turning the curved spring in front, it possibly might answer better. The curved spring was accordingly greatly reduced in length, and she was directed to wear it in front; but she now complained that it passed in between the labia and caused great irritation and profuse leucorrheal discharge, and, when she sat down, the pad struck the chair, and incommoded her exceedingly. The curved spring was still farther shortened, and the pad made to press upon the posterior commissure and anterior portion of the perineum, thus removing the obstacle to sitting down comfortably; and so great a degree of curvature was given to this spring, that it lay outside, in front of the labia, thus obviating the other objection, and now the relief afforded was complete. The prolapsed uterus was perfectly supported, all the distressing symptoms were entirely removed, and, for the first time during many years, my patient was enabled to walk with ease and satisfaction. She has now been wearing it about two years, and walks the greatest distances with an entire freedom from all the symptoms of prolapsus, under which she had previously endured worse than the pains of dissolution. She now wears it only when she goes out to walk; and before putting it on she wraps a clean linen or muslin cloth

* Ibid.

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around it, which feels more pleasant than the oiled silk that covers the padding. When she returns, she takes it off, and does not find it necessary when going about the house."

"It remains only to say, that the curved spring should be eight and a half or nine inches long, from the lower extremity of the pad to the top of the circular plate upon which it slides; and it must not be forgotten that the tempering must be omitted, in order that the patient may give it a degree of curvature to suit herself, that it may lie outside of the labia externa."

Dr. Annan points out the advantages of this truss. We may leave their determination to actual trials with it, and content ourselves at present with simply introducing it to the attention of our readers.

NEW MODE OF PERFORMING AMPUTATION OF THE PENIS.*

A negro, aged 27, had enlargement of the penis. It measured eight inches in length, and on its under side, from about three inches from the scrotum to the neck of the penis, the structure of the organ was changed so as to resemble cartilage, and so much enlarged as to throw the glans upwards until almost in contact with the dorsum of the penis, an inch above the neck. Upon the enlarged portion were two fistulous orifices, through which only a few drops of urine passed when the patient urinated, the greater portion of the water passing in a very small stream through the natural channel. The glans penis was of the natural size, and free from disease; its shape was somewhat altered from being turned upward by the pressure from beneath. The urethra was almost obliterated in the enlarged part from pressure, and there was a slight stricture at the bulb. Such was the state of the case when it came under the care of Dr. Ogier, of Charleston, South Carolina. Under his treatment it became worse, and he determined to amputate the organ. Yet he was anxious to preserve the glans, which it has been stated was sound. He, therefore, determined to cut through the penis above and below the diseased portion, to cut *it* out, and, applying the glans to the stump, to endeavour to unite the two. The "Nigger" was sufficiently anxious for appearances to seize the offer, and Dr. Ogier accordingly made the interesting attempt.

"The operation was performed on the 20th of June, 1835, in presence of Drs. Holbrook, Baron, Gourdin, Logan, and a number of students, in the following manner. I divided the penis transversely from below upwards about two lines above the neck—having divided the urethra, I cut carefully through the corpora cavernosa until only about one or two lines of the dorsal portion of this remained. I then turned the edge of the knife towards the pubis, and cut in a horizontal direction until I had extended the cut above the diseased portion, leaving a layer of the corpora cavernosa, about two lines thick and about four in breadth, attached to the skin on the back of the penis. The bistoury was then turned downwards, and the section of the penis thus removed. The glans was therefore left connected to the stump by a thin layer of the corpora cavernosa and the skin on the dorsum of the penis. The hæmorrhage was not very extensive, only two arteries requiring the ligature. The general oozing from the stump was easily arrested by dusting the parts with powdered resin. The wound was allowed to remain exposed to the air for five hours before the dressings were put on. The glans penis was then brought down and applied to the stump, and confined there by seven sutures. A silver catheter was introduced carefully so as to give support to the parts, as well as to prevent the urine from passing through the urethra; and, finally, the whole penis was enveloped in fine cotton, kept in place by a slight bandage.

I used the cotton more to keep the parts in contact than to preserve the heat in the glans; and in all wounds

* Ibid.

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about the ear, lips, or nose, I have found it very effectual in keeping the parts in contact: the fibres of the cotton on each side of the cut become moistened from the oozing of the wound, and afterwards dry and adhere to the lips, and thus prevent all possible motion between them."

After forty-eight hours, the dressings were removed. The glans was doing well, except at the attachment of the frænum, where it was in a state of mortification. This slough came away on the fourth day, leaving the glans and urethra open on its under surface. By dint of a little trouble, the remainder healed well. Then the loop of skin and corpus cavernosum, on the dorsum of the penis, was tied with a tight ligature, and gradually sloughed off. Twice the mucous membrane of the urethra, about two inches from the end of the penis, became swollen and indurated, and it was necessary to apply leeches, and to keep a catheter in the urethra. But these symptoms subsided, and all went on well. In October, the negro went to his master's plantation in the country, and at the date of the report, May 1836, the disease had not returned. Before Sambo went back to the fields, he declared that the sensibility of the glans was by no means bad, and, being an inductive philosopher, he determined to put the point beyond dispute, by having connexion with a woman. We may presume that he was satisfied, for he made no complaint.

The operation is more a matter of curiosity, than one that is likely to be often practised or practicable. But a case like the present *may* occur, and the result of the present is worth knowing. Unfortunately, amputation of the penis, if necessary, is usually required for cancer of the organ. If that be cancerous, and the glans is unaffected, we should still be loth to leave it. The operation must be, pro tanto, less complete, and the chances of recurrence of the morbid growth must be increased.

Modification of Dupuytren's Instrument for the Cure of Artificial Anus.*

Dr. J. R. Lotz, of Union County, in the United States, has proposed a modification of that instrument of M. Dupuytren's, with which most of our readers must be familiar. We need not relate the case in which it was applied, nor compare it with the late Baron's instrument. Its great advantage over the latter is said to be its much inferior weight. All that we shall introduce is the description of the instrument, and of its mode of application.

A figure gives a correct idea of the general form of the instrument. The two fenestræ† are about an inch in length, and a quarter of an inch in breadth, surrounded by a solid rim about a line in thickness. The whole instrument is about six inches in length, and from these data the other dimensions may be readily deduced.

They are articulated in the following manner. At the upper end (that which in forceps corresponds with the joint), and again in the middle of one of the blades, there are attached two steel slides which play loosely through mortice holes cut in the corresponding parts of the other blade. Near each of these slides is a screw; that at the lower end passes through one blade, and simply presses on the other, acting in such a manner as to regulate the distance of the blades from each other, while that in the centre of the instrument passes through both blades, approximates them, and causes the edges of the fenestræ to press against each other.

The mode of application is this. The central screw being removed, the blades are entirely detached. One of them is inserted into each of the intestinal extremities in this condition, and the slider being introduced into the mortice holes, the surgeon is assured that the fenestræ are equidistant from the orifice.

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* Ibid.

† These are the blades introduced into the two portions of the bowel.

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The central screw is now introduced, and the adjusting screw having been previously turned far enough to allow for the thickness of the double walls of intestine included between the pinching extremities, the central screw is tightened until the edges of the fenestræ press firmly upon the intervening membranes. By unscrewing the adjusting screw and tightening the central one, the pressure can be increased to any requisite degree without destroying the parallel direction of the blades.

We must own that we do not perceive what material advantage this instrument possesses over M. Dupuytren's. Both might be simplified. They are the same in principle. Surgeons have the opportunity of deciding for themselves.

SOME EXPERIMENTS AND OBSERVATIONS ON TYING THE CAROTID AND VERTEBRAL ARTERIES, AND THE PNEUMO-GASTRIC, PHRENIC, AND SYMPATHETIC NERVES. By SIR ASTLEY COOPER, Bart.*

Our old friend Sir Astley is of far too active a mind to be doing nothing. He is still anxious to improve a profession that he has ornamented. The experiments to which we shall now direct attention are fresh examples of his zeal.

The powers of the anastomosing vessels are sufficiently established. Ligatures have been placed on all the great arteries with more or less success; the collateral branches being almost always fully adequate to carry on the circulation. Sir Astley's experiments are not therefore intended to prove that point, for it is proved. What they do shew will be shortly evident.

1. EXPERIMENTS ON THE CAROTID AND VERTEBRAL ARTERIES.

A. *Vertebral and Carotid Arteries of a Dog Tied—Animal killed nine months afterwards.*

On the 28th of January, 1831, Sir Astley tied the right and left vertebral and the right and left carotid arteries of a dog, and all was completed within half an hour. The animal appeared insensible, or as if it were intoxicated; it had difficulty in breathing; its pupils were dilated; its volition was diminished; and it ran against the leg of the table, or any other body, without seeing or regarding it. When placed upon its legs, it fell down on its right side, and had spasmodic twitchings of its hinder extremities.

At the expiration of a quarter of an hour, it was still insensible: it had shiverings, although placed near the fire: it rested its head upon the ground on the right side: its respiration was still laborious; and its pupils were dilated.

After an hour and a half, however, it was able to stand, and, although with difficulty, to stagger around a small room.

On the 29th it was dull, and indisposed to move. On the 30th, it was much the same, and not inclined to move or eat. On the 31st, it walked round the room; and ate about an ounce of food, but would not lap. On the 1st of February, it was much better: it ate and drank; and from that time gradually recovered. It afterwards became a good house-dog, and Sir Astley kept it for nine months, when he killed it and injected it.

The carotid artery on the right side was obliterated opposite the fifth and sixth cervical vertebræ: below the obliteration it is injected from the aorta; above the obliterated part it is filled with injection, (1) from the inferior thyroideal artery communicating with the superior thyroideal by large branches; (2) by a large descending cervical branch, dividing into numerous large anastomoses; and (3) by branches from the vertebral artery anastomosing with the external carotid artery on the first vertebra of the neck.

The left carotid was obliterated from near its origin, but filled with injection above the obliterated part, by the inferior thyroideal artery communicating with the superior, and by the ascending cervical artery from the subclavian, by

* Guy's Hospital Reports. No. III.

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numerous and large anastomoses, and by an œsophageal artery from one of the intercostals communicating with the superior thyroideal artery.

The right vertebral artery was obliterated near its origin on the seventh cervical vertebra, but filled with injection above the obliterated part by two branches from the superior intercostal arteries, which passed, on the back of the spine, into the arterial canal of the vertebræ, at the fourth, fifth, and sixth intercostal spaces. The vertebral artery thus produced passed to the second vertebra of the neck, where it formed the basillary artery, and, in its course, had festoons or loops formed in it, as far as the first vertebra, at each intervertebral substance; and here, upon the transverse process of the first cervical vertebra, it formed communications with the carotid.

The left vertebral artery was obliterated close to its origin; but was filled with injection by an anastomosing branch from the superior intercostal artery, which entered between the fifth and sixth vertebræ of the neck; and by a second branch, also, from the intercostal artery passing on the posterior surface of the transverse processes of the fourth and fifth cervical vertebræ: then, over each transverse process was a loop of arterial communication, forming down each side a beautiful display of festoons.

The basillary artery began at the base of the second cervical vertebra; passed to the junction of the first vertebra to the head, where it again received vessels from the vertebral arteries; and then proceeded, as a single artery, to the points of the petrous portions of the temporal bones; where it formed the commencement of the circle of Willis, which was well filled with injection, and sent off its usual arteries to the brain.

The vertebral artery also joined the internal carotid artery on the transverse process of the second cervical vertebra of the neck.

We have been particular in recording the exact mode of anastomosis in this case, because it could hardly be anticipated, that so sudden and so violent a cutting off of the supply of the blood to the brain would allow time for the development of adequate anastomoses. Those anastomoses may be broadly said to be—the re-entrance of blood into the carotid, above the ligatures, by the communication of the thyroid arteries; and the re-establishment of the circulation in the vertebrals above the ligature, by means of the upper intercostal arteries.

On a second occasion, Sir Astley tied successively the two vertebral arteries, and, after an interval of eight days, the two carotids.

The animal was weakened in its forelegs; but in other respects it suffered less than the former; and on the following days it took its food as usual.

The carotids were obliterated at the points where they had been secured, as were the vertebrals. But both were supplied above that spot by an ample collateral circulation which it is unnecessary for us to describe.

When the carotid *and* vertebral arteries were tied in the rabbit, that animal immediately died.

The next object of Sir Astley was, to ascertain the different effects that would be produced by tying separately the vertebrals and the carotids.

Ligature placed on both Carotids.

When the carotid artery on each side of the neck was tied, little effect was produced; except, that the respiration was quickened for a few minutes, and the animal rendered dull and disinclined to eat during the day: but on the following morning it appeared lively, and ran about with its natural activity.

Sir Astley conjectures that the quickening of the respiration may be attributed to a greater quantity of blood being impelled through the vertebral arteries, in consequence of its interruption in the carotids. May not the excitement of the operation, perhaps some slight disturbance to the nervus vagus in its performance, account for the circumstance in question?

B. *Ligature placed on both Vertebral Arteries.*

"I next placed a ligature around

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both vertebral arteries. When I had tied the first, there was some difficulty in breathing; but when I had tightened the second ligature, this difficulty was greatly increased. The respiration was at first slow, but it afterwards became quicker. The animal retained volition and sensation, but its fore legs were weakened.

At the end of two hours, its breathing was laborious; its ears dropped to the right side; its heart beat quickly; it was dull, and indisposed to move; and its fore legs were still weak.

After four hours and a half, it ran about, but with its ears fallen: its respiration was slower.

On the following day, there was a murmuring in its breathing, which was increased under excitement: its heart beat quickly and forcibly: its pupils were not dilated.

On the second day, the respiration was slow and heaving; it had an irregular action of the heart; it was dull; and its heat was 102. In the evening, its respiration was irregular and heaving; but it moved about, and took food.

On the third day it was dull: its breathing was slow: its heart beat quickly; it ate food.

On the fourth day, it appeared heavy, and indisposed to move. The action of its heart was quick and strong: its respiration was slow, but no longer stertorous.

On the fifth day, its breathing was slow: it appeared dull and heavy: the action of the heart was still quick.

On the sixth day, the respiration was laborious and slow, being only 64, instead of between 120 and 150, the natural number of inspirations, in a minute: its heart beat rapidly, and not forcibly: it was very dull, and indisposed to move: it was getting thin, but it took its food as usual.

On the seventh day the animal was found dead; and on the eighth I examined it, after injection, and found an abscess in the neck. The vertebrals had been well secured, and the brain had received injection by the carotid: the basillary and cerebellar arteries were filled from the circulus arteriosus. This animal's death may have been hastened by the abscess.

I have many times repeated this experiment; and it uniformly produces a marked effect upon the respiration, which it renders slow and laborious. The fore legs are weakened; and a much more severe effect is produced upon the animal than when the carotid arteries are obstructed; insomuch, that it will rarely recover from the operation."

C. *The Carotids first Tied, and then the Vertebrals.*

Sir Astley tied the carotid arteries. The respiration and circulation became quicker, and the former remained so for forty-eight hours, or a little more. After the fourth day it appeared quite healthy, and on the ninth Sir A. tied the vertebral arteries, which were obviously enlarged. The respiration stopped immediately, and the animal appeared dead; but it afterwards made several gasps, from convulsions of the diaphragm: its hinder extremities became also convulsed; but in a minute, all voluntary motion ceased.

On opening the abdomen and chest, it was seen that the peristaltic motion of the intestines remained; and the heart continued to act for a few minutes after apparent death.

D. *Carotids Tied—Vertebrals Compressed.*

Thinking that compression of the vertebral arteries might prove a substitute for the ligature of those arteries, which is difficult, Sir Astley tied the carotid arteries. Respiration was somewhat quickened, and the heart's action increased; but no other effect was produced. In five minutes, the vertebral arteries were compressed by the thumbs, the trachea being completely excluded. Respiration almost directly stopped: convulsive struggles succeeded; the animal lost its consciousness, and appeared dead. The pressure was removed; and it recovered, with a convulsive inspiration. It lay upon its side, making violent convulsive efforts;

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breathed laboriously; and its heart beat rapidly.

In two hours it had recovered; but its respiration was laborious.

The vertebrals were compressed a second time. Respiration stopped: then succeeded convulsive struggles, loss of motion, and apparent death.

When let loose, its natural functions returned, with a loud inspiration, and with breathing excessively laboured.

Compression was re-applied at the end of five hours, of nine hours, of twenty-four hours, and of forty-eight hours, with just the same effects as on the previous occasions.

E. *Vertebrals Tied—Carotids Compressed.*

After tying the vertebral arteries, the respiration became immediately laborious, the right ear fell, and the right fore-leg was partially paralysed. On the following day, the respiration was slow, and it appeared dull, but it had partially recovered from the other symptoms.

"I pressed, with my thumbs, the carotid arteries on each side of the larynx, which was left free.

It fell upon its side; it lost all sensation and volition; and its eyes were drawn back.

Upon removing the pressure, it soon recovered.

On the second day, its respiration was quick; its ear much risen; its fore leg less paralytic: it sat up; and moved from place to place.

A second time I compressed its carotids. Its eyes were drawn back; it was convulsed; and its respiration was quick and laborious; and it was affected in the same way as on the preceding day, but in a less degree.

On the third day, its respiration was hurried, and 150.

For the third time I compressed its carotids. It fell upon its side, and was insensible; but soon recovered, and ran about."

On the fourth day it was dull with laborious respiration. On the morning of the fifth it was found dead. Abscesses had formed around the ligatures. Coarse injection entered the cranium by the internal carotids, but not by the vertebrals; nor was there any injection in the basilar artery by the circle of Willis.

F. *Carotid and Vertebral Tied on the same side.*

"I tied the carotid and vertebral arteries on the same side; the breathing became laborious, and the fore-leg was partially paralyzed. I subsequently compressed the vessels on the other side, with the usual effect of producing apparent death: but the pressure being removed, the animal recovered; and at the expiration of eighteen days it was quite well, excepting that it had a difficulty in breathing, under excitement."

G. *Vertebral and Carotid Arteries tied at the same time.*

This was done. The animal breathed no more. There were only thirteen or fourteen convulsive contractions of the diaphragm, and convulsions of the hinder extremities.

"The same effect of interrupting the streams in the vertebrals and carotids was produced in an equally conspicuous manner, without the application of ligatures, as follows. The animal was held in a convenient position, with its neck extended, and its head thrown back. I then applied my thumbs, so as to compress, at the same time, the two vessels on each side, taking care to leave the trachea entirely free from compression. Respiration ceased in a few seconds: some struggling then took place, and the animal appeared dead. The pressure being then removed, the respiration was completely suspended; but artificial motion being given to the ribs, the animal gasped, began to breathe quickly, and recovered."

It might reasonably be asked, if pressure on the nerves had no effect in occasioning the preceding train of phenomena. Sir Astley properly anticipated this proper question, and proceeded to answer it in the proper way, by making experiments on those nerves themselves.

1. He placed a ligature on each pneumo-gastric nerve of a rabbit. The

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animal's breathing became heaving and laborious, and fell in eight hours from 130 to 48 inspirations in the minute: it was likewise accompanied by a stertorous noise: the heart beat feebly, but rapidly: food was refused. These symptoms continued; and on the following morning it was found dead. The same experiment was several times repeated, and the results were nearly uniform, the animals dying at the end of from nineteen to twenty hours.

In these experiments, it was likewise observed that the blood circulating in the arteries gradually assumed the venous colour, and that the animal heat at the same time decreased in a remarkable degree. At the time of the performance of the experiment the heat, in one rabbit was 104; at the end of 8 hours, it was 93½, in the rectum; and at the end of 12 hours, when the rabbit died, it was 88½ in the abdomen. In a second rabbit, the animal heat at the time of the experiment, was 102; in 16 hours, it was 93. In three quarters of an hour more it died, when the temperature was 87 in the abdomen.

The examinations after death exhibited the lungs gorged with blood, and looking like the liver; a fluid in the pleural cavity; the stomach full of undigested food; and the œsophagus likewise distended with it, in those cases in which the animals had taken food after the ligatures had been applied.

Sir Astley divided the phrenic nerves in quick succession.

The diaphragm, of course, was paralysed, and the respiration was laboriously performed by the intercostal muscles, which heaved the ribs violently. In a quarter of an hour it lay upon its side, making great efforts with its intercostal muscles; and sometimes it stopped, as if fatigued, and then again commenced. In twenty minutes it was dead. The heart's action and the peristaltic motion of the bowels were observed for a short period after apparent death.

3. Sir Astley tied the sympathetic nerve in the neck.

The respiration became quick and irregular; but sensation and volition were unaffected. The heart's action was very quick: there was a general trembling; but, when the animal was put down upon the ground, it ate some greens. Its respiration continued irregular, and its heart's action very quick; and after eight days it was killed. The nerves were found well tied: one had ulcerated below the ligature; the other was nearly ulcerated through; and the ligature was surrounded by suppuration.

He tied these nerves in another rabbit, which, a month after the operation was still lively and active.

4. Sir Astley tied, in the same rabbit, the pneumo-gastric nerve, the grand-sympathetic, and the phrenic. The respiration became laborious; the animal dull, and indisposed to move; and the heart's action feeble. The breathing continued excessively laborious for a quarter of an hour, when the animal died. Bloody fluid was found in the chest: the lungs were not much changed. In another similar experiment, the animal died in three-quarters of an hour.

5. Sir Astley tied the jugular veins on each side of the neck in a rabbit. Its respiration was reduced to 68 inspirations in a minute, which is about half the natural number. After four hours, it ran about as if nothing had happened; and eventually recovered.

When killed and injected, three anastomosing veins passed from the anterior to the posterior part of the jugular vein, and conveyed the blood from the head to the heart. The vertebral vein too was enlarged.

In another rabbit, after the jugular veins were tied, the respiration became slow. For five days it seemed dull. On the seventh day, it was convulsed, rolled over frequently, lost in a great measure sensation and voluntary motion, and died. On examination, a clot of blood was found extravasated in the left ventricle of the brain.*

Such are the experiments performed

* Sir Astley has known this happen from enlargement of the glands in the neck of a boy.

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by Sir Astley, with the view of determining the effects of arresting or diminishing the supply of arterial blood to the brain. The correlative experiments performed upon the nerves tend in a great degree to do away with the main objections which might plausibly be urged against those on the arteries. After making all reasonable allowance for the effects of the mere wounds, for disturbance of the system, and for violence committed on the nerves themselves, candour must admit that Sir Astley has succeeded in establishing positively, what before were comparatively suppositions—the important consequences of the ligature of the great cerebral arteries. These consequences may be thus summed up.

1. Tying both carotid arteries in the rabbit, does not seem to occasion any material effects. In the dog, the same operation is not followed by serious results.

2. When the vertebral arteries are tied in the rabbit, the respiration is rendered slow and laborious—the fore legs are weakened—the action of the heart accelerated—and the animal does not recover.

It is remarkable that very slight injuries, after a ligature has been put upon these arteries, will destroy life; insomuch, that if they are first tied, even dissecting for the carotids, without tying them, will cause death.

3. Compression of the carotid and vertebral arteries at the same moment, occasions in a few seconds cessation of the respiration. The same effect results still more decisively, if the four vessels are tied.

When the dog is the subject of this experiment, it loses its volition and sensation, and appears as if it were intoxicated; but the anastomosing vessels gradually restore the circulation, by means of the other branches of the subclavian artery at the back and sides of the neck.

Such are the results which appear to be very conclusively established by the experiments of the worthy Baronet.

It is not uninteresting to revert to the effects of tying the pneumo-gastric nerves. The diminished frequency of respiration—the loading of the lungs with dark blood—the venous character of that in the arteries, from which, when opened, it still flowed per saltum—and the fall of the animal heat, are all striking phenomena.* Are all to be explained by the primary influence upon the respiration, or is effect upon the heart, perhaps upon the blood itself, to be regarded as an important element of causation? Such questions are more easily asked than answered.

We cannot quit the subject without

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* In an Appendix, Sir Astley has shewn that this diminution of animal heat is not constant. We extract the memoranda of three experiments.

"*Experiment* 4.

Before the exp. respiration	128	Animal Heat 104
After.....	52	..... 102½
2 hours..	48	..... 101½
4	52	..... 102½
6	60	..... 104½
8	52	 95
8¾.....	ceased.	 90

Experiment 5.

Before the exp. respiration	124	Animal Heat 104
After.....	76	..... 102½
2 hours..	80	..... 102½
4	52	..... 102½
6	60	 101
8	56	 95
10	48	..... 88½
10½.....	ceased.	 86

Experiment 6.

Before the exp. respiration	96	Animal Heat 104
After.....	56	..... 102½
2 hours..	68	..... 102½
4	52	..... 102½
6	72	 104
8	52	..... 105½
10	48	 102
10½.....	ceased	..... 98"

We do not understand this subject of animal heat. We could easily cite facts which seem to contradict each other. This apparent inconsistency is too often found, where the subtle operations of the nervous system are concerned.

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offering the compliments of the season* to the time-honoured experimenter. May he have plenty of them. With his fund of good humour, and his professional zeal, they are certain to be not only merry, but useful ones, be they ever so many.

STATISTICS OF REMEDIES IN DUBLIN.

Mr. W. Moore, Licentiate of Apothecaries' Hall in Dublin, has published in our valued contemporary of Ireland, a rather curious table. It is an analysis of the prescriptions received at the establishment opened by his grandfather in the year 1780. Accurate copies have been kept from that period, and they probably offer a rough view of the changes that have occurred in the practice of the most eminent physicians and surgeons of Dublin for a period of nearly sixty years.

"In order to effect this, I have divided the entire time into three equal portions; from each of these I have taken 1200 prescriptions, and marked the frequency with which each medicine occurred in them;—the results are shewn in the following table. The first column contains the years from 1780 to 98, the second terminates with the year 1817, and the third with 1836."

The following is the table.

Emetics	74	7	6
Enemata	58	7	20
Blisters	47	64	39
Warm plasters	45	10	3
Leeches	1	20	45
Antimonial Preparations.			
Tartar emetic	104	31	50
James's powder	4	36	44
Kermes mineral	8	3	0
Antimonial powder	14	28	15
Narcotics and Sedatives.			
Opium	102	79	116
Morphia	0	0	4
Paregoric elixir	72	28	13
Digitalis	0	8	3
Hyoscyamus	0	4	44
Lactucarium	0	0	11
Peruvian Bark	102	42	13
Quinine, sulphate	0	0	20
Saline Preparations.			
Alum	5	1	1
Nitre	45	9	11
Glauber's salts	35	12	2
Sal polychrest	38	0	0
Sulphate of potash	0	12	22
Rochelle salt	63	13	22
Epsom salt	0	213	102
Diaphoretics.			
Mindererus's spirit	67	35	22
Nitrate of soda	3	12	2
——— potash	6	0	1
——— ammonia	0	2	21
Guaiacum	32	10	2
Sarsaparilla	8	15	5
Stimulants, Antispasmodics, &c.			
Castor	8	10	1
Musk	4	1	0
Assafœtida	18	7	12
Camphor	9	22	52
Ammonia	64	88	39
Ether	9	22	2
Spirit of nitrous ether	20	10	10
Iron	22	42	20
Preparations of Mercury.			
Calomel	84	189	114
Blue pill	17	39	156
Mercurial ointment	35	11	1
Ethiop's mineral	15	0	0
Mercury with chalk / Mercurius alcalizatus	18	6	35
Purgatives and Aperients.			
Jalap	136	35	14
Scammony	80	120	51
Colocynth	19	31	67
Aloes	46	79	63
Senna	94	107	134
Castor oil	62	73	32
Rhubarb	81	59	170
Magnesia	70	43	52
Syr. rosar. solutio	21	0	0
Expectorants, &c.			
Hippo	62	58	152
Ammoniacum	21	26	11
Squills	33	47	45
Iceland moss	0	2	7
Basilicon ointment	32	7	0

Dub.-Journ. September 1836.

Mr. Moore adds some remarks on

* It is Christmas when we publish this.

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this really interesting table. We shall only notice those of most consequence.

The enormous decrease in the exhibition of emetics appears to arise from the decline of the Cullenian doctrine of fever.

Enemata, almost lost in the second period, are again more frequently employed. They ceased to be extensively administered, when Dr. Hamilton drew attention to the value of purgatives given by the mouth.

Local bleeding has become much more popular. Broussais has probably contributed to this.

Opium has fairly kept its ground. The camphorated tincture has fallen.

Blue pill has steadily risen into favour. Mercurial inunction has as steadily declined.

The facts, in general, speak for themselves, and we recommend each reader to cast his eye attentively upon the table, and muse on the revolutions of drugs as of more mighty things.

Abortion with Tardy Expulsion of an undecomposed Fœtus.*

Dr. Isaac Porter, of New London, Connecticut, has related the following case, as a practical reply to a query in a number of this Journal. In an article on the "Signs of Pregnancy," our reviewer had enquired:—

"How does atmospheric air get at blood confined within the uterus? We believe there is a medico-legal question now pending—perhaps decided—respecting the putrefaction, or supposed putrefaction, of the dead fœtus in utero. Does the fœtus become decomposed in utero when deprived of life?" Dr. Porter, we say, relates the following case in answer to this interrogatory.

Case. Mrs. ——— had proceeded to the fourth or fifth month of pregnancy, without experiencing any unusual circumstance. The signs of quickening, however, though anxiously expected, did not appear. With this exception, and the occurrence of severe dropsical symptoms, the other signs of pregnancy continued undiminished for another month. At this time the size of the abdomen began gradually to diminish, and at the eighth and ninth months was scarcely more prominent than ordinary. Still, a foreign body could, at times, be perceived through the parietes of the abdomen and uterus. The breasts also were distended, and there were occasional oozings of milk, though after the beginning of the ninth month, there was an evident diminution in the size and fulness of the former, and an almost entire interruption to the flow of the latter. The general health remained perfectly good. At the close of the ordinary period of utero-gestation, without pain, or any uncommon efforts, the distended membranes were found slightly protruding from the vagina—pains resembling cramp succeeded, and subsequently alarming hæmorrhage. Enveloped in the unbroken membranes, was a fœtus apparently of five months, which, upon delivery, was found free from any marks of decomposition. The placenta, which followed spontaneously, was in a morbid condition, being larger than ordinary, and resembling in form and consistence a sarcomatous tumor. At the usual period after delivery, milk was secreted in large quantity, and recovery was rapid and complete.

This case certainly appears to prove that a dead fœtus may reside for a considerable time within the uterus, without undergoing decomposition. The features of the case are all in favour of this conclusion.

"It may be mentioned, as a striking coincidence, that eight cases of abortion have come to the knowledge of the writer, which occurred during the month within which the death of the fœtus, in the case detailed, is supposed to have taken place, and all in this immediate neighbourhood. In these cases there was incipient putrefaction at the time the fœtus was expelled."

Our contemporary reports two cases, communicated to the Academy of Me-

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* Amer. Jour. of Med. Sciences, Feb. 1836.

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dicine on the 7th of March, 1835, by M. Vassal, in which a decomposed fœtus was expelled. In one case, the symptoms indicated gestation of four months, although the fœtus seemed one of about three months. When the membranes were ruptured was by no means clear. The mother recovered. In the second case, the woman was seized, at the end of the fifth month, with malaise, rigors, &c. She went her full time, when labour commenced, the membranes were ruptured, and a most abominably fetid, black fluid was discharged. The fœtus wanted the right arm, but the humerus, radius, and ulna were found in the bed in the coagula.

SOME OBSERVATIONS ON THE USE OF THE HYDRIODATE OF POTASS AS A REMEDY FOR VENEREAL AND CACHECTIC SYMPTOMS.

There are few of our readers, who are not aware of the tendency to fashion that prevails in the exhibition of remedies. One year, calomel and opium are the rage—the next is consecrated to the glorification of colchicum—then every body must swallow strychnine—now, or, at least lately, iodine was the mode. Some men fall more easily into the periodical prescribing of strange remedies than others do. A man of good common sense is loth to give up the use of a medicine he is acquainted with, for that of one he knows nothing about. If an old remedy answers in a certain case, he naturally asks himself —"why should I change it? I know what it will do; but I do not know what effects this new drug may produce. When the remedies I am in the habit of employing fail, when the indications of treatment are not likely to be responded to by their familiar and well established properties, then I should be wrong not to try rational experiments with new medicines. Till then you must excuse my rushing headlong, to the hazard of my patient and my own disgrace, into senseless though shewy trials of a pharmacopœia of novelties." Such is the calm rebuke, we may imagine a physician or surgeon possessed of sound judgment and experience, offering to the rash prescriber of new drugs.

There are many reasons why such drugs should be abused. The love of novelty is always operative, and constitutes at once a very useful and a very dangerous element in human nature. It is useful because it is the source of all great inventions—it is dangerous, when not moderated by caution and good sense, because it leads to perpetual change.

This passion for novelty is backed at the present day, by the spirit of journalism. The rapid phases of the weekly prints offer temptations to men of strong desires and weak minds, to publish incessantly any thing new, no matter whether it be philosophically true or not. It is painful to be obliged to admit that the medical press is in an unsound condition. Reputations are too often sacrificed from a spirit of personal hostility, and as openly awarded from motives of personal favouritism. The professional merits of a man are determined by a standard, decisive enough, but certainly not honest. Does he belong to a certain party? If he does, he is a second Hunter, or a Baillie, or a Cuvier—an admirable lecturer, although he stutters to snoring pupils—an excellent practitioner, although every body of discretion is glad to escape from his clutches. If he does not belong to the proper party, his ignorance and imbecility become immediately conspicuous.

Party rage was always deemed to have gone its utmost lengths in the political world, and in the political press. Of late years, that press has been distinguished on the whole both for its ability and honesty. It is true, that extreme opinions have been advocated. Yet in the leading journals while political creeds are enforced with all the power of language, their columns are seldom polluted with gross ribaldry or disgusting personalities, never with deliberate untruths. It has been reserved for a scientific profession to exhibit in its literary appetite a keen relish for slander, and a taste for what

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is frequently neither more nor less than falsehood.

Journalism has encouraged the disposition to attract the profession, we will not say to humbug it, by positive assertions of the powers of new drugs. It is easy, as experience has proved, to get up a glittering array of cases, in which some newly-imported remedy has effected marvellous cures. The vulgar stare, and think that he must be a very clever fellow who has done all this. Gradually indeed the credulous are undeceived, and experience, after a season, shews how exaggerated the statements were. But the experimenter's purpose has been served. He has attracted notice, has been consulted in strange and in common cases, and as soon as the old bubble has fairly burst, he blows another. Such is a brief sketch of what has occurred on the professional stage. There have been too many actors in the farce, but we do not allude in particular to any one. Yet conscious sensitiveness may induce this or that individual to imagine, that we point at him.

> When you mention vice or bribe,
> 'Tis so pat to all the tribe:—
> Each cries—"that was levelled at me."

In the present article, we merely intend adverting to the hydriodate of potass, a remedy which has been latterly used in many complaints of very opposite descriptions, but has been especially employed in the treatment of venereal symptoms. We shall make a chapter in the work of Mr. Judd, and a lecture by Mr. Wallace, of Dublin, the text on which we shall hang some comments.

We have already drawn attention to the exhibition of the hydriodate of potass in cases of syphilis, particularly in two notices of two papers by Dr. Williams.* We remarked that, on the whole, the evidence adduced was unsatisfactory, and that the actual powers of the hydriodate yet remained to be determined.

Mr. Judd's observations on the hydriodate are imperfect. They are rather anticipations of what it may do, than actual statements of what it has done. The facts he states are four in number, and all are instances of secondary symptoms. We shall give a sketch of them.

1. A man had connexion with a prostitute on the 17th of June, 1833.

On the 20th, he had urethritis and a pimple on the body of the penis. On the 22nd, the pimple had become a sore, which healed on the 30th, and the urethritis ceased.

On the 27th of September, we find him with ecthyma, ulceration on the lower part of the tibia, an ulcer at the back of the throat, a gleet, and an excoriated glans penis. Under the employment of antimony, the warm bath, &c. followed by the infusion of gentian, the ecthyma declined, the ulceration healed, and chocolate-coloured stains, with œdematous ankles, and a few fresh flat pustules were left on the 28th of October. On the 1st of November there came out an eruption of lichen, which assumed a pustular character, and faded. The patient grew fat, but was pale and bloated, and suffered from severe nocturnal pains in his shins, when, on the 12th of December, he was ordered:—

Potass. hydriod. gr. v. *ter die.*

By the 24th, he was quite free from pains, and was in good health. In February, he had, for a fortnight, effusion into the abdomen, which was removed by purgative diuretics; and by a report, date July 12, we find that there had been no relapse.

2. On the 10th of November, 1832, a man had connexion with a common woman. On the 2nd of January, a slight sore commenced on the glans penis, for which he took five grains of blue pill twice daily. How long this was continued it is difficult to say, for the case, displays the ordinary obscurity of Mr. Judd. On the 9th, bubo which did not suppurate. On the 12th the sore healed. On the 11th of February, after exposure to wet and cold, a sore throat succeeded by pains, and in April, by a discharge of pus and blood from the nostrils. On the 18th of May, he

* One of those papers was published in the Medical Gazette—the other in the first number of the St. Thomas's Hospital Reports.

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presented rupia. It would appear that mercury was persevered in till the 19th, a period of upwards of four months! He suffered, with slight intermissions, from severe pains in the forehead and temple, the bloody discharge, now sanious, continuing. On the 24th of August, he was ordered to rub in, with temporary benefit. On the 18th of September, an abscess formed over the right os nasi, where a large ulcer formed. On the 4th of October there came pain and swelling of the left eyebrow, which was extremely indurated. Then followed an abscess in the lid, whence the probe passed to carious os frontis. On the 9th of November, periostitis of the left shin. From Aug. 30th to Nov. 11th, the mouth was kept sore. On the 19th, the protuberant part of the lid sloughed. On the 24th a large thin shell of bone came away from the throat.

26th. "The left nostril has become ulcerated within, and excoriated without; every now and then yellow discharge concretes upon it, and the patient is excessively plagued by it. A bent probe passed in by one nostril goes through the septum and out at the other; the part, once the bridge, of his nose has sunk upon the face so as to form a slightly curved hollow: he has a pallid leaden hue of countenance, he loses strength, and his nocturnal pains continue."

Thus he went on, his health being much impaired, his sufferings great, the nocturnal pains severe, the ankles swelling, when, on the 15th of December, he was ordered *potass. hydrio.* gr. v. *ter die in aquâ menth.*

To this was added a pint of new ale daily.

On the 21st, the nocturnal pains had almost ceased, and his health was better. On the 26th, the swelling of the forehead and eyelid had quite subsided. The ulcers soon after healed, and, in short, recovery took place in a highly satisfactory manner.

3. "In another secondary case, that of a young gentleman (the original disease not being contracted in England), with eruptions on the skin, pains in the shins and effusion into the synovial membrane of the knee, I easily effected a cure by this same remedy. He hunts and gets wet, and although more than a year has elapsed, he has not experienced any return of his complaint."

4. "The Hydriodate in the present month, in another instance, quickly removed an eruption and nocturnal pains; but the bubo remains to be healed. I am also trying the remedy upon a node, but have not continued its use long enough to ascertain how far it is efficacious in removing osseous depositions."

Such are the effects, such the evidence adduced by Mr. Judd. When we examine it we perceive that the cases in which the hydriodate was beneficial were of the cachectic character —cases to which mercury is notoriously, as a specific, inapplicable—cases, indeed, which are generally the result of the abuse of mercury. In the second case this was plainly the fact, and the unfortunate patient had good reason to complain of the treatment adopted in the first instance.

Let us turn to Mr. Wallace.

This gentleman has tried the effects of the hydriodate in many cases of secondary symptoms. He has formerly, it would seem, employed other preparations of iodine, but latterly he has confined himself exclusively to the hydriodate, and for rather a singular reason. Most persons would use this or that form of a medicine because it answered better than another. The chief consideration, however, with Mr. Wallace would appear to be a speculative one; at all events, he puts his hypothesis in the front of the battle.

"In the first place," he says, "I believe, that whatever preparation of iodine you use, it is only in the state of hydriodic acid, or of a hydriodate, that it enters the system. I have never been able to detect free iodine in any part of the body, or in any of the excretions. If you administer iodine in its free state to a dog, and examine the contents of his stomach, after the lapse of a very short time, you will not be able to detect an atom of iodine in the free state. You will find that it has all been con-

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verted into hydriodic acid. On one occasion Dr. O'Shaugnessy could detect no iodine in the matter discharged from the stomach of a dog to which he had given this substance fifteen minutes previously, but he found a large quantity of hydriodic acid. Are we not, from these facts, entitled to arrive at the conclusion that iodine, as I have said, enters the system only as an hydriodate or as hydriodic acid? If this be the case, it is quite useless to employ iodine in any other form, when it is our object to introduce it into the system."

We would observe that it by no means follows, because iodine is converted in the stomach into hydriodic acid, that therefore it is of no use giving iodine in any other form than that of hydriodic acid. This is as palpable a bull as ever gored paddy. If Mr. Wallace could shew that hydriodic acid was the only efficient form of the medicine, and that iodine exhibited in any other way would *not* be converted into hydriodic acid in the stomach, then his conclusion would logically follow from his premiss. As it is, we have a true Hybernian non sequitur. Put it in the form of a syllogism, and see how it looks. Hydriodic acid is the only form that gets into the system—but iodine, introduced into the stomach, immediately becomes hydriodic acid—therefore it is useless to give iodine.

The second reason which Mr. Wallace urges against any form of iodine but the hydriodate is a tangible one. He affirms first that iodine in its free state is very irritating to the stomach, the conversion into the hydriodic acid not being sufficiently rapid to prevent disturbance or even inflammation of the mucous membrane. And, secondly, he declares that the hydriodate of potass does not give rise to such injurious effects. This is the plain expression of a fact, and we have only to inquire if the fact is a true one.

We are disposed to go some way with Mr. Wallace, but not to the very end of his conclusion. We decidedly think that he overrates the mischievousness of the tincture of iodine, or of other forms of it besides the hydriodate. We have seen the tincture exhibited on a considerable scale, and we have given it freely ourselves. When the case was judiciously selected, and the medicine carefully managed, we have seen no bad effects whatever from its use. Perhaps there are few remedies which have been more extensively prescribed in London within these last few years, and though rash and ignorant people have no doubt abused it, still the experience of the best physicians and surgeons of the metropolis will certainly not be found to correspond with Mr. Wallace's. It is rather remarkable that when iodine was first employed for the relief of secondary symptoms, it was this very calumniated tincture, that effected those rather surprising cures which attracted the notice of the profession. It is a common practice to "give a dog a bad name," but, scientifically speaking, we may question its propriety.

While we defend the tincture of iodine against the unmerited obloquy heaped on it, we agree with Mr. Wallace that, on the whole, the hydriodate of potass is the preferable preparation. It is milder in its effects, less variable in its operation, and while it does not stimulate the intestinal mucous membrane so much, it appears to exert less of that peculiar depressing influence, occasionally witnessed after the exhibition of the tincture. Common experience is seldom, in the long-run, false, in cases to the determination of which it is applicable. That experience has, in this country, given the general preference to the hydriodate of potass. It is probable that Mr. Wallace has too bad an opinion of the tincture of iodine, but in declaring the superiority of the hydriodate of potass, at all events in venereal affections, he echoes the prevailing sentiment.

Mr. Wallace dwells much on the presence of the hydriodate in the urine, and in some of the secretions. There is nothing in this to attract attention. It is only what occurs with hundreds of drugs as well as with articles of diet.

The effects which he has observed to follow the employment of the medicine may be briefly stated:—

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1. Increase of appetite, strength, and spirits.

2. Increase of the excretions, and secretions; of the urine—the perspiration—the saliva—increased action of the bowels. None of the effects are constant, and even the reverse of any one of them may happen.

3. Occasionally the hydriodate disagrees with the stomach, occasioning dyspepsia, heartburn, and a sort of sore throat. These accidents, Mr. Wallace informs us, are controllable by quinine.

4. Some patients have complained of watchfulness, and of a feeling in the head, approaching to headache. A purgative, and intermission of the medicine, have been necessary.

5. In two patients, who were overdosed, there was sickness, soreness of throat, colicky pains, vomiting, and purging to a slight degree, frequent pulse, and exhaustion. These symptoms were relieved by laxatives.

6. Several patients have been attacked with a pleuritic pain. When bled, the blood was cupped.

7. On one occasion purpura decidedly resulted from it.

8. In a patient who took the hydriodate indiscreetly and excessively by his own direction, there occurred indigestion of the character already noticed, with severe headache, and a rapid and quivering pulse. "But the most remarkable of his complaints was a peculiar state of his eyes,—such a state as I have never seen before or since. The pupils were dilated, and both his eyes were in a state of incessant motion. These motions strongly resembled those of a child who has congenital cataract. He found himself quite unable to fix them on any object. He kept his hand constantly over them, as if to shade them from the light, yet he seemed to say that the light did not hurt them." He complained of constant headache. Soon after this, he was seized with paralysis on one side of the body, preceded by muscular tremblings. He continued in a dangerous state for some weeks, when he began to amend, and has a reasonable prospect of recovery.

Such is the substance of Mr. Wallace's remarks. They appear to us to be very just, although we think he is inclined to under-estimate the ill effects and overrate the good that spring from the use of the hydriodate. Be that as it may, it is obviously a matter of importance to understand rightly the operation and the action of any remedy, particularly of one of so powerful a character as the one before us.

Our own experience, so far as it goes, and latterly we have employed the hydriodate in many cases, agrees very nearly with that of Mr. Wallace. The experience of a hospital is frequently not borne out in private practice, the constitutions of the patients in one and the other presenting material differences. This may account for our finding the hydriodate disagree much more than Mr. Wallace seems to have done. The patients to whom we have given it have been mostly private patients—persons in the respectable classes in London. The subjects of his observations have been chiefly in and out patients of the infirmaries to which he is attached. We may well conceive that the stomach of a Patlander accustomed to regale on potatoes and whiskey, will bear stronger stuff in the way of physic, than will that of an English gentleman or tradesman. Every one accustomed to hospital and private practice in London, is aware of the difference of dose necessary in the administration of many medicines, and of the difference of effect observed in their patients in the former and the latter.

Up to a certain point, the hydriodate of potass, like the iodine itself, appears to be a stimulant, if not a tonic. Certain it is, that it quickens the pulse, often increases the appetite and strength, will even occasion embonpoint, and excites more or less the whole system. It resembles in this respect arsenic, which, it is well known, will operate as a tonic in certain doses, and in certain cases.

Yet the hydriodate cannot be deemed a mere tonic. The medicines of that class exhibit, on the whole, very different effects. If we watch, for example, the operation of bark, we find that it excites the action of the heart,

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and of the capillaries, increases the strength, and invigorates the system. If pushed to a certain point, the bad effects that follow are just what might be supposed to result from an excess of the same sort of action. Too much blood is made, and it is circulated with too much force—sanguineous congestions or local inflammations ensue—the whole system is oppressed and overloaded—but none of that peculiar depression occurs, which marks the influence of a poisonous agent, exerted on the nervous system, or displayed through its medium.

To call arsenic a tonic, if by tonic is to be understood a remedy like bark, is clearly an abuse of terms. Arsenic, in appropriate doses, will at first quicken the action of the heart, and excite the system much in the same way that a tonic does. Acting thus, it will even cure diseases for which bark is notoriously efficacious—neuralgia, or intermittent fever. But here the analogy abruptly stops. If the arsenic is still given, or if its dose is increased, a new train of symptoms are suddenly developed. Either inflammation of the gastro-intestinal mucous membrane supervenes, or a prostration occurs, that is evidently the result of a powerful poisonous agent. We have seen arsenic, given for disease of the tongue, agree very well for a certain time, and all at once the patient has been seized with tremblings, rapid and weak pulse, and deadly exhaustion. One patient died in this condition, and, on dissection, nothing decisive was found. There was a slight redness of the gastric mucous membrane, and that was all.

There appears to us to be a greater analogy between the action of iodine and arsenic, than between that of iodine and any other medicine. We say analogy, for their specific effects are materially different.

Iodine, at first, like arsenic, stimulates the system, and excites the action of the heart and of the capillaries.* If carried too far, its effects are not simply, like those of quina, excess of stimulation, but, again like those of arsenic, poisonous and specific. The gastro-intestinal mucous membrane may suffer, or it may not. That is rather a local and accidental consequence. But whether it does or not, peculiar symptoms ensue—nervous agitation—rapidity and weakness of the heart's action—muscular tremblings and debility—general depression—and even death. We have seen all these effects, short of actual destruction, from the exhibition of iodine, both for cachexia and for malignant growths.

The hydriodate of potass differs from iodine in possessing more of the simply stimulating, and less of the peculiar and poisonous property. It is a difference, however, of degree and not of kind. The cases related by Mr. Wallace, and some that we could bring forward are sufficient to shew that, although it may be given with more freedom than free iodine, the same description of bad effects must be apprehended and guarded against. We need not fear them so much, but we must not forget that they *may* come.

Practically speaking, the injurious consequences of the hydriodate are rather of the immediate than remote description—they flow from its primary and stimulating qualities; not from its consecutive depressing ones. The mucous membrane of the stomach is irritated and excited, and secretes more acid, and the irritation extends to the œsophagus and pharynx. We have found uneasiness of the stomach, pyrosis, heart-burn, and that peculiar constriction and heat in the throat alluded to by Mr. Wallace, very commonly produced by a continuance in the employment of the medicine. Occasionally we see still more distinctly the effects of the stimulant property of

* When we talk of the action of the capillaries, we do not wish to advocate any hypothetical notions of their functions. We use the term for want of a better, and refer merely to the operations of the capillary system, exhalation and secretion and absorption, without troubling ourselves about their causes.

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the hydriodate. Inflammation of the pleura, headache dependent on cerebral congestion, or inflammation of the gastro-intestinal mucous membrane, may ensue. It is not at all uncommon for persons who are taking this medicine to be attacked with heat of skin, headache, full pulse, loaded tongue, in short, with decided pyrexia. Probably, if the remedy were continued under these circumstances, either some positive local inflammation would arise, or the poisonous effects of the hydriodate would be developed.

We think, then, there can be little doubt that the sensible effects of the hydriodate of potass are in the first instance of a stimulating and a tonic character. We say sensible effects, for there may be, and there probably are others, of a more refined and subtle description, which not being shewn by any tangible alterations of the functions, are not so readily appreciated.

Were we to believe some authors, the hydriodate is a medicine of great value in all secondary venereal symptoms. This does not agree with what we have seen, nor is it likely à priori to be true. Few things can be more opposed in all essential features, than a secondary papular or tubercular eruption, and the cachectic rupia or ecthyma. The affection, in the first instance, may be the direct and simple consequence of the syphilitic virus, the constitution of the patient is good, the symptoms are of a sthenic character, and mercury, if properly exhibited, effects a cure. In rupia or ecthyma all bespeaks cachexia. The vesicles or pustules form scabs, foul ulcers, or become phagedænic or sloughing sores—the periosteum or the bones may be affected—the patient is emaciated—debility is evident—and, mercury, the abuse of which has usually caused the symptoms, almost always aggravates them. It is not likely, we say, à priori, that any one remedy should suit equally such opposite states. It is not consistent with our common experience of medicines or of maladies, nor does it agree with what we have observed of the effects of the hydriodate itself.

The venereal cases in which we have seen most benefit from the hydriodate, have been chiefly those of a cachectic character—cases in which repeated courses of mercury have been given, and in which the patient either does not require or will not bear that remedy. There are usually pustular or vesicular eruptions, producing scabs and unhealthy, sloughing, or creeping ulcers—ulceration of the throat of a character similar to that upon the skin—nodes, caries of the bones—chronic inflammation of the testis and the cord. Such is the kind of case in which the hydriodate appears, upon the whole, to do most good. It is frequently surprising to see how rapidly, and even permanently, the patient will recover. He may have gone on for months, or even for years, with only temporary and delusive periods of amendment, when a course of the hydriodate may set him at once and effectually upon his legs.

We lately attended a gentleman with Mr. Davis, an intelligent surgeon of Hertford. The patient had been ill for two or three years. When we saw him, there was considerable tumefaction of the alæ nasi, with redness of the integument, and discharge from the nostrils. There were several cachectic ulcerations on the skin—ulceration of the soft palate and pharynx—emaciation—and general ill-health. We prescribed sarsaparilla and some other remedies, and the patient mended a little. But portions of diseased bone came away from the nose, and a piece, apparently of the horizontal process of the palate bone, was discharged through an ulcerated aperture in the front of the velum. We now put the patient on the hydriodate. The result was most gratifying. All the symptoms very speedily subsided, and the gentleman has been left with a small, round, circular aperture in the palate, productive of too little inconvenience to require the application of the suture.

We must own, that although occasionally the hydriodate has effected both rapid and permanent benefit, it has not in the majority of instances done so. It is the character of the cachectic disease we have mentioned, to return again and again, and to exhibit repeated vi-

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cissitudes of improvement and relapse. It is indeed a singular complaint, and one well calculated to illustrate the doctrines of the humoral pathology. A patient is attacked with an eruption of rupia or ecthyma, and the vesicles or pustules ulcerate or slough—at the same time, perhaps, ulceration of the throat appears or spreads, or sloughing invades the mucous membrane of the fauces or the nares. After a time these symptoms become mitigated—the sloughing is arrested—the ulcerations may heal—and the patient may even seem to be restored to health. But the recovery is deceptive. Suddenly, he is again seized with the whole or with a part of his former symptoms, which again exhibit the same successive phases of aggravation, arrest, and amendment or apparent cure. This scene may be, and generally is repeated many times, and the event depends on the treatment employed, and on the constitution of the patient. If both are bad, the attacks grow more and more serious, or rather they leave him less and less able to sustain them. The bones may or may not become affected, but, whatever be the character of the specific symptoms, it is not from them, per se, that death usually results. Accidental circumstances lead to disease of some vital organ, and, in the majority of instances, either phthisis, or fever ending in ulcerations of the mucous membrane of the bowels, terminates the case.

It could hardly be expected that any remedy would at once cut short a malady of such a character. It is clearly a constitutional disease, and, like scrofula, depends on too general an alteration of the system to be at once put out. Such anticipations are supported by experience, and it is seldom indeed that a case of any severity is quickly cured. Of course, there are differences of degree in this, as in all other complaints, but we repeat that we must not anticipate an off-hand *and* permanent recovery from any system of management, undoubtedly not from any single drug.

In many of these cases the hydriodate agrees remarkably well. Given at the proper time, it seems to arrest the phagedænic action, promote the cicatrization of the sores, and re-establish the health of the patient in a very remarkable degree. But many other remedies do the same thing. Sarsaparilla—the mineral acids—tonics—sometimes small doses of mercury, produce in these cases more or less of the same effects as the hydriodate. In short, it is preposterous to term this medicine a specific for this complaint, for though sometimes it answers better than any of the others we have mentioned, it not unfrequently does not answer so well. It is an addition, and a valuable addition to our means of treatment—it gives us one other medicine to ring the changes with, and that is the most that can fairly be said of it. We may mention a case which is sufficiently illustrative of these remarks.

Case. A respectable tradesman, after a long and injudicious course of mercury for a venereal sore, was attacked with extensive ulceration of the fauces, and with a phagedænic ulceration on the left arm, which succeeded a vesicle that scabbed. A variety of means were tried. Sometimes he was better, sometimes he became worse. He was put on the hydriodate in full doses, with almost instantaneous benefit. The ulcer of the throat almost healed. Again it broke out, and again the hydriodate effected the greatest benefit. But still these relapses occurred, and now, at the end of two years and a half from the first appearance of the ulceration in the throat, the patient is in a very precarious condition. The fauces are covered with a sloughy ulceration. A portion of the lateral and nearly all the vertical cartilage of the nose have been destroyed — and gastro-enteritis following the *cautious* employment of the hydriodate nearly proved fatal about a month ago. In each attack the medicine has appeared to be of signal service, yet two years and a half have passed, and the individual is not materially benefited, but rather the reverse.

We could mention many cases of this description, and we can assure our readers that there is not a greater error than to suppose that, because the hy-

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driodate is of temporary, it is always of permanent service. It is a remedy which should be employed with judgment, caution, and that distrust which *must* spring from an acquaintance with the peculiar characters of the disease.

Not unfrequently, it is either of no service at all, or it positively disagrees.

We have at present under our care a gentleman, whose case has been in some respects a singular one. Having had, to his knowledge, neither sore nor urethral discharge, he was attacked with yellow ulceration of the throat, and what looked precisely like the venereal tubercle. He consulted a surgeon, who felt unwilling to order mercury, and prescribed the tincture of iodine. The ulceration quickly healed, and the eruption appeared to decline. But soon both re-appeared. We saw him about nine months after the commencement of the ulceration of the throat. Both tonsils were then the seat of sloughy ulcers, and there were several spots of rupia on the skin. He had also secondary ulcerations at the verge of the anus, which were exquisitely painful. We ordered a course of calomel and opium, under which the ulcerations of the rectum and of the throat healed, and have never since returned. But the rupia spots ulcerated, and at intervals fresh sloughy ulcerations have appeared on different parts of the body, accompanied latterly with nodes. We have repeatedly tried the hydriodate in this case. After a few days, it occasions heart-burn, pain at the epigastrium, pyrexia, and a more sloughy state of the sores. To these it has never been of service, and the patient has been always made ill by it.

In cachectic cases of a more obscure character, and totally unconnected with syphilis or with the abuse of mercury, the hydriodate occasionally does wonders.

Case. A gentleman was seized with what appeared to be pleurisy. He was bled to a great, indeed to an improper extent. He had previously been a free liver, and the depletion reduced him in such a manner, that he never properly rallied. Under these circumstances, he was attacked with violent pains in the bones—he was sallow, emaciated, and had all the appearance of a man broken down with the venereal cachexia. He was under the care of the most eminent physicians at Cheltenham, but got no better, or not materially so. He came to London, and consulted an eminent surgeon, who prescribed the hydriodate. The pains in a week or two disappeared, and he rapidly recovered. Whether the cure will be permanent, it is of course impossible to say.

The hydriodate has been applied to the treatment of other venereal affections, besides the cachexiæ we have spoken of. In the present article, we confine ourselves to what we have personally witnessed, and shall, therefore, state only the results of our own observation.

1. We have not tried it in cases of primary syphilis, nor do we *imagine*, from what we know of its operation, that it will be of service. Perhaps, in some cases of primary phagedænic ulceration, it may be useful.

2. Nor, from what we have witnessed, should we conceive that it is applicable to the pure syphilitic eruptions —the scaly, or the tubercular. These eruptions are so much under the control of mercury, and its action is so different from that of the hydriodate, that it seems both unnecessary and unreasonable to employ, or to anticipate much from the employment of the latter.

3. It has been lauded in cases of papular eruption. But we should pause before we attach much importance to its use in *them*. Lichen is so fugitive in its character, that it is difficult to determine the effects of remedies upon it—at all events, there is an obvious source of fallacy.

4. We have tried the hydriodate in some of the more vague secondary venereal symptoms.

a. In a case of enlarged tonsils, covered with white superficial ulceration, and connected with vaginal discharge and condyloma, it was of no benefit.

b. A gentleman had sores, which were said in Paris to be excoriations, and were treated in England as syphilitic.

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He seems to have taken a good deal of mercury. His health had been impaired by previous dysentery, contracted in Syria, while travelling for amusement. Two years afterwards we saw him. He was liable to frequent irruptions of small superficial sores on the lips and tongue, and had psoriasis palmaria. We have tried the hydriodate three times in this gentleman. Each time it occasioned dyspepsia, and did no good to the complaint. In another similar case, we used the medicine with the same want of success. In a third case, it was of use, but the disorder was getting well, when we ordered the hydriodate to be taken.

Such are the results of our own experience. We have employed the hydriodate in other cases, but the results were not sufficiently distinct to induce us to allude to them. On the whole, we are disposed to coincide with those who have found the hydriodate answer best in cachectic cases. But we think that, even in these, it is uncertain, and that it has been overrated. It is another string, and not a bad one, to a bow that has several already, but requires more.

The most usual mode of exhibiting the hydriodate, is in the state of solution in camphor mixture. It is nauseous in that form. Perhaps the pleasantest formula is the succeeding, or one like it.

℞. Aquæ Florum Aurantii, ʒiij.
Aquæ Distill. ..... ℥j.
Syrupi Aurantii ..... ʒj.
Potass. Hydriodatis ... gr. v. ad x.
M. ft Haustus ter die bibendus.

We have found that, in cachectic cases, it is usually better to conjoin the hydriodate with small quantities of sarsaparilla. Either the fluid vehicle of the hydriodate may be sweetened with a drachm or two of the syrup of sarsaparilla, or the latter, in the most appropriate form, may be taken a little after the dose of the hydriodate.

In private practice, patients will seldom bear more than ten or twelve grains of the hydriodate thrice daily. It is better to begin with small doses, and gradually increase them. We may commence with five grains twice in the day, and augment the proportion to the requisite amount.

Ulceration of the Cæcum, and Abcess of the Right Iliac Fossa, communicating with the Interior of the Bladder, and producing the Symptoms of "Irritable Bladder." By Henry James Johnson.

The following case is in some respects so remarkable as to deserve to be recorded. The diseases of the urinary organs merit in a high degree the attention of the surgeon, for they are numerous, important, and not unfrequently obscure. It is only by a very careful examination of the urine, and by a comparison of its states with the other symptoms, that we can hope to guard ourselves against the many sources of error, that interfere with the formation of a correct opinion.

The facts that have been elicited by recent investigations, with respect to the pathological changes that accompany an albuminous condition of the urine, are of a highly interesting character. It has been proved, beyond the possibility of doubt, that such an alteration of the urine, if permanent, and particularly, if accompanied with prominent symptoms of disturbance of the bladder or the kidneys, is usually the consequence of organic changes in the latter. Of all the diseases of the kidney, and there are several, that lead to the secretion of albuminous urine, chronic inflammation, ending either in the mottled state described by Dr. Bright, or in abscesses in the cortical or tubular structure, is the most frequent.

It is singular to observe the variety displayed in the symptoms of what, for want of more exact information, we must consider chronic inflammation of the kidney. In one patient, the irritability of the bladder is excessive, and he seems to labour under all the miseries occasioned by the presence of a stone in it. In another patient, there

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is nothing which attracts his own, or, perhaps, the physician's attention to the urinary apparatus. The extent of lesion is no measure of the severity of symptoms, nor is severity of symptoms a positive indication of any lesion at all. I examined lately the body of a gentleman who died worn out by the cachexia induced by the abuse of mercury. His urine for many weeks before his death, was albuminous, and there was great irritability of the bladder. Yet, on dissection, I could detect no further disease in the kidney, than a very dubious injection of the mucous membrane of the pelvis of the ureter. Why one individual, affected with chronic inflammation of the kidney, should labour under severe symptoms of disturbance of the bladder—and why another, with equal or with greater renal disease, should not, are questions which it appears impossible to answer satisfactorily at present.

Contradictory as facts in some measure are, obscure as the symptoms of alterations of the kidney in their earlier stages must be owned in many cases to be, there are some phenomena which, taken in the aggregate, will not often deceive the acute and experienced observer.

When a patient complains of extreme frequency of making water—when he passes very small quantities at a time—when, in the act of micturition, and after it, he experiences a cutting pain at the end of the penis, and uneasiness referred to the perineum or to the neck of the bladder—when the urine is decidedly albuminous, acid, and free from mucus—and when, on sounding the bladder, no stone is discovered in it, while examination by the rectum detects no change in the former organ or urethra—the surgeon may suspect, and his opinion will be very seldom a false one, that the symptoms depend on disease of the kidney.

It is not my object to go into the history of chronic inflammation of the kidney. Our knowledge of the pathological change in its commencement—of the symptoms that then mark it, if any positive symptoms do so—and of the treatment of the malady in all stages—is, unfortunately, both limited and vague. My reason for making these observations has been to clear the way for the appreciation of the characters of the case that I now proceed to describe. It will be seen that the case presented such symptoms as will generally justify us, in supposing that renal disease exists, yet the event shewed that there was none.

Case. In the latter part of last Summer, I was requested to see a respectable young man, a tradesman, who was then in the following condition.

He was much emaciated, and had all the external appearances of serious organic disease.

What he principally suffered from was frequency of micturition. He was obliged to make water every half hour—he passed little more than an ounce at a time—prior to the act of micturition he experienced uneasiness in the region of the bladder, and dull pain in the perineum—in the act, he had cutting pain at the end of the penis—and this continued for some little time after the last drops of urine had been voided. He was not aware that the stream of urine was ever suddenly arrested, but once or twice there had been a tinge of blood in it, and the last drops were always discharged with tediousness and difficulty. He complained of no pain in the back, but referred to the urethra and the bladder as the principal seats of his uneasiness. Pressure over the pubes was productive of pain.

There was cough—the respiration was imperfect and hurried—he had at times what, from his description, appeared to be purulent expectoration—the chest sounded indifferently on percussion—there was bronchial respiration pretty generally in the upper lobe of each lung—and pectoriloquy existed under the right clavicle. Thus the general and the physical signs of phthisis were unequivocal. The pulse was frequent—there was a disposition to hectic—the bowels were rather irregular, being sometimes confined, and sometimes rather relaxed.

The urine was pale, rather turbid, and acid. On applying nitric acid and

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heat, the presence of albumen was distictly shewn, but there was in addition a sort of precipitate of rather opaque whitish flocculi, which were not unlike adipocire in *appearance*.*

On introducing a catheter into the bladder, I found that the patient was able to empty it in the ordinary act of micturition. No calculus could be detected. The introduction of the instrument was attended with much spasm of the muscles of the bulb, and with considerable irritation and pain in the perineum and bladder. Whilst the instrument was in the latter, the finger was introduced into the rectum, and pressure made on the prostate and trigone. This occasioned comparatively little inconvenience.

The history of the case may be briefly told. For some months the patient had laboured under phthisical symptoms, for which he had been judiciously treated by his usual medical attendant, Dr. Thompson. These symptoms were relieved, when, suddenly, about two months before he applied to me, he was attacked with a frequent desire to make water, and with the other symptoms of irritation of the bladder. The means employed to relieve the disorder were attended with little benefit, and he had gradually been growing worse before he came under my observation. It is proper to observe that from the period of the accession of the urinary complaint, the thoracic had declined in prominence and in importance.

As the usual symptoms of disease of the bladder were not present—as I could not detect the existence of a calculus—and as the urine was albuminous, I conceived that the disease was probably in the kidney, and that the irritability of the bladder was merely symptomatic of that. Yet the suddenness of the access of the symptoms, the anomalous deposit in the urine, and the uneasiness on pressure in the region of the bladder above the pubes, were circumstances that I could not satisfactorily explain.

I applied leeches to the hypogastrium, and prescribed a combination of the tincture of henbane with the liquor opii sedativus and the liquor potassæ. Under these means, combined with rest in the recumbent posture, a regulated diet, and attention to the bowels, the pain on pressure above the pubes disappeared, and the frequency of micturition was rather diminished.

Various means of lessening the irritability of the bladder were tried. All medicines possessed of a diuretic property were injurious. The liquor potassæ, the infusion of the uva ursi, the infusion of buchu, severally increased both the frequency of micturition and the attendant uneasiness and pain.—Narcotics, whether given by the mouth, or in the form of injection, or in that of suppository, were alone of any service. They reduced the times of making water to four or five in the day, and about as many in the night, and the quantity of water passed at once was augmented to a quarter, or even to half a pint. The irritability of the bladder varied from day to day, without adequate apparent cause. One night the patient would only be compelled to rise three or four times, on the next, he would, perhaps, be disturbed nine or ten times. The quantity of albumen contained in the urine gradually decreased, although in this too there was much variation. On one day there would be a large albuminous precipitate, and two or three days afterwards, the application of acid would merely render the urine rather cloudy.

Although, upon the whole, the urinary symptoms were much mitigated, and the sufferings of the patient materially diminished, he evidently grew weaker. It was between two and three months from my first seeing him, when he rather suddenly died. This was in the commencement of October last. I examined the body, with the assistance of Dr. Thompson and of Mr. Oliver, one of my pupils.

* I regret that this was not more carefully examined. I had intended to have requested some gentleman practically conversant with analytical chemistry to ascertain the exact nature of this unusual deposit.

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The emaciation had gone to a great extent.

There were tubercles in both lungs, to the upper lobes of which they were confined. Some of the tubercles were softening, and in the apex of the right lung were two or three small vomicæ.

The kidneys were perfectly sound, and the ureters were unobstructed.

The bladder appeared, at first sight, healthy. There was no inflammation of its mucous membrane, no thickening of its parietes. But on its anterior wall, about the junction of its middle and upper third, was a small, round, fistulous opening, scarcely of the diameter of a common pea. The mucous membrane on the margin of the aperture was perceptibly injected, and the aperture itself had been evidently the result of ulceration. The aperture in the bladder communicated with a sinus in the cellular membrane between the organ and the abdominal muscles at their pubic insertion. From this point the sinus proceeded in the cellular membrane between the muscles on the right side and the peritoneum to the right iliac fossa, where it opened into a sort of abscess, partly formed by the cellular membrane there, partly by the cæcum, a large portion of the wall of which was destroyed by ulceration.—Thus the bowel was freely laid open into the cellular membrane of the iliac fossa, from which a sort of winding abscess proceeded to communicate with the interior of the bladder. The mucous membrane of the cæcum, of the ileum at the ileo-colic valve, and of a small part of the ascending colon, was in a state of ulceration.

No other morbid appearance was discovered.

There can be little doubt of the real nature of this interesting case. It was originally one of ulceration of the mucous membrane of the cæcum, that affection being perhaps connected with the softening of pulmonary tubercles.* The ulceration extending through all the coats of the bowel, its interior was laid open into the cellular membrane of the iliac fossa, and a fæcal abscess resulted. The suppuration gradually travelled along the continuous cellular membrane, until it arrived at the front of the bladder. In this it occasioned ulceration, and the fistulous aperture that followed. It is probable that the sudden access of symptoms of irritation of the bladder, marked the period of its perforation.

Why the abscess should take this course, and why the aperture in the bladder should be so small, it would now be useless to inquire. It is clear that the albumen contained in the urine, was occasioned by the pus that found its way into the bladder.

But it is not so easy to determine the immediate cause of the irritability of that organ. Was it the existence of the small fistulous opening in it, or was it the discharge admitted into the bladder through the opening? The irritability of this organ, which results from disease of the kidney itself, is exceedingly capricious. Sometimes there is considerable disorganization of the kidney, and the urine is highly albuminous, without any, or with very little irritation of the bladder—sometimes this is excessive, with only moderate alteration of the kidney, and with only a small quantity of albumen in the urine. It is obvious that the careful observation of facts, and the accurate discrimination of particulars can alone explain these apparent inconsistencies, if they admit of satisfactory explanation at all.

DR. M'CABE ON DISEASES CONNECTED WITH SPICULÆ OF BONE IN THE SKULL.

Hastings, Nov. 10, 1836.

GENTLEMEN,

In the last Number (50) of your invaluable Journal, I read the heart-

* Ulceration of the mucous membrane of the termination of the ileum and commencement of the great intestine, is common in advanced phthisis, and is seen occasionally in *its* incipient stage.

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sickening detail of the sufferings and fatal termination from chorea, of Miss ——, your interesting patient.

In describing the post-mortem appearances in this case you observe, "it will probably be doubted by many, whether such frightful phenomena can be fairly attributed to such small matters as two sharp points of bone, on the internal surface of the skull," &c. It is true that certainty on this point cannot be attained; but, reasoning from the symptoms during life, and the appearances after death, *in two cases* which came under my care, I feel little doubt in agreeing in your observation—"that it was very improbable (had you been permitted to examine the spinal marrow) that any thing further would have been found to account for the terrible symptoms" it was your painful duty to witness.

Case 1. About five years ago, in my attendance upon a young gentleman, I had frequent opportunities of seeing his father, Mr. F——d, then about 40 years of age, who, as I understood from his lady, had six years previously been in excellent health—highly talented, and a valuable member of society; about the time mentioned, and without any apparent cause whatever, he perceived his vision gradually impaired, with (from time to time) severe head-aches about the forehead. His vision, however, rather improved, but in a short time symptoms of mental derangement supervened, for which he went through the regular routine of the practice of various mad doctors, until he settled into a state of idiotcy, with occasional fits of troublesome excitement:—At length a fit of apoplexy occurred, which in about a week terminated fatally.

Assisted by my friends, Dr. Chapman and Mr. Ranking, the head was carefully examined. To our surprise, we observed the two anterior clinoid processes of the sphenoid bone much longer than natural; one of them a full quarter of an inch in length, and sharp as the point of a fine penknife—the other, although not quite so long, shewing the same disposition to morbid growth; the soft substance of the brain, into which these points penetrated, was inflamed and very soft—but there was very little effusion into the ventricles or between the membranes.

Case 2. Two years since, in conjunction with (I believe) the above-named gentlemen, I inspected the head of a young lady, Miss T——r, of great moral worth and highly talented. For many years she had been subject to tormenting headaches, principally about the occiput: in one of these attacks, alarming symptoms of phrenitis supervened, which baffled all I knew of remedial means. Great nervous exhaustion and coma followed, which terminated the sufferings of this amiable person, in about 12 days from the commencement of the attack.

At the base of the skull, on cutting into a portion of the brain, the scalpel met a hard substance, which proved to be a spicula of bone, a full quarter (or more) of an inch in length, but not perpendicular—rather inclined, with a double jagged point, not unlike the junction of the two points of a forceps. As in the former case, the neighbouring part of the brain was soft and inflamed, and, like the other case, very little effusion into the ventricles, or between the membranes.

Semi-Poisoning from Iodine.

In my humble sphere of practice, I have, as regards new medicines, generally attended to the advice, as regards fashion in dress—

> "Be not the *first* by whom the new is tryed,
> Nor yet the *last* to lay the old aside."

I have seen the following results from the exhibition of iodine.

A poor lad, aged 14, with considerable swellings of the glands of the neck, was brought to me from the country for my advice. I prescribed for him *five* grains of iodine and fifteen of the hyd. potassæ in an ounce of distilled water; fifteen drops of the solution to be taken *three* times a-day, in a wine-glass of water—also an ointment, of about the same quantity of the above medicine to six drachms of lard, the

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size of a nut, to be rubbed on the glands every night. As the boy lived fifteen miles from Hastings, I did not see him for a fortnight; at that interval he again came to me—I found his appearance very much changed for the worse; from a stout healthy-looking boy, he became thin and emaciated—the swellings of the neck were certainly diminished, but his whole body was covered with large livid petechiæ, and his mother informed me that, for the last three or four nights, he had bled profusely from the mouth and nose during sleep, the blood being, however, very pale and thin. I of course ordered the medicine to be discontinued, and directed for him an astringent mixture of the infusion of roses, with an additional quantity of acid, and furnished him with a bottle of port-wine—the first for the credit of pharmacy, the latter for good fellowship, and to repair, in some measure, the mischief I had caused to the poor fellow. Under *these* remedies, he got soon well of the constitutional symptoms, leaving me to consider other means for the reduction of the "embonpoint" of the neck.

I am, Gentlemen,
Your obedient Servant,
P. M'CABE, M.D.

SEVERE INJURY OF THE BRAIN—SUPPURATION — TREPHINE — INCISION OF DURA MATER—RECOVERY. By Mr. R. M. FORSAYETH, of Templemore, Tipperary.

On the 21st of August, 1836, I visited Henry Oldfield, aged 18, who, eleven days before, received a blow from a reaping-hook on the upper and back part of the frontal bone, penetrating it, the dura mater, and brain. Had *very slight* paralysis of opposite side—some pain in the head—total loss of speech—other senses perfect: pus oozes through the hole. Introducing a probe gently, it entered nearly two inches, causing it to flow freer, and giving entire ease to pain: pupils regular—pulse 56—has no other complaint whatever; was bled and had medicines before I saw him. I laid bare the fracture; the external table was plainly driven into the diploë, a curious burr surrounding the hole in the skull. To have calomel, gr. iij. and opium ¼, 4to die, till the gums were touched; diet light. Gave directions to his father, an intelligent man, to watch the effect of the medicine, and let me know how he went on, particularly if the hole filled up.

He seemed improving fast until the 28th, when I saw him again, kindly accompanied by Dr. Dix, of the 94th regiment. He got very heavy: all discharge stopped by a fungus from the diploë: on introducing a probe, pus followed. I applied the trephine, and took out a piece of very thick skull; there was a small quantity of coagulated blood on the dura mater, which was rather redder than usual—also a hole corresponding to that in the skull, and a circular piece of bone of the internal table, that gave way before the hook, and slipped to one side. Pus did not flow from the hole in the dura mater, but it followed the probe, introduced an inch or so, and ceased on withdrawing it, as if a valve lay at the opening. Dr. Dix suggested the propriety, at all hazards, of opening the dura mater. I made two *deep incisions* in it, from side to side of the trephined space, and obtained altogether about ʒss of pus—put on soft dressing, and left him. He, a quarter of an hour afterwards, felt much lighter—an occasional dose of the calomel to be still given. The discharge lessened daily; the wound healed kindly, yet slowly, and he is now quite well—a manifest, though slow improvement in the speech.

I had an exactly similar fatal case (except the speech) where the piece of bone was carried into the brain, causing an abscess three inches deep. The boy was trephined—lived six weeks, and died from the wound closing, and confining the discharge. After this case, I would not have hesitated to make a deep incision into the brain, and search, cautiously indeed, for the bit of bone.

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Spirit of the Foreign Periodicals, &c.

German Contributions to Practical Medicine. Communicated by Robert Thacker, M.D. Derby.

The following interesting observations on the diseases and state of medicine in Chili, are condensed from Professor Poeppig's "Travels in Peru, Chili, and on the River Amazon."*

"The population of Chili is rapidly on the increase, owing to the many advantages enjoyed by the inhabitants in their political position, and also to the circumstance that they are very little exposed to the diminishing influence of disease. Indeed, whatever has been said by earlier travellers of the remarkable healthfulness of the climate, may be credited in its fullest extent. Neither the extreme aridity of the northern provinces, nor the long-continuing and severe rains in the southern, would appear to exert any particular influence on the duration of life or on the health of the natives. In Mendoza and San Juan, which are only separated from Chili by the chain of the Andes, all classes of the inhabitants suffer severely from scrofula, and cretinism is not infrequent; in Chili, on the contrary, the latter is entirely unknown, and some traces of the former are only occasionally observed among the residents of the northern parts of the country at the foot of the Andes. The foreigner who makes a lengthened stay in Peru may regard himself as fortunate if he escape a tertian intermittent, which will frequently bid defiance to the most careful and judicious treatment. In Chili, on the other hand, there is no fear whatever of this disease, indeed, many Peruvians affected with it come yearly into Chili with the view of regaining their health. The regularity of the meteorological phenomena, the gradual manner in which changes of temperature take place, the purity of the water used for drinking, the constant winds, and the absence of marshes and damp woods, are the main causes to which the Chilians of all grades are indebted for the particularly good health they enjoy. The infectious diseases occasionally introduced soon lose their virulence under the sky of Chili. The contageous putrid fever of Guayaquils is only remembered to have once appeared at the commencement of the present century in some of the northern sea-ports. Small-pox alone is of frequent occurrence, and the fatality occasioned by it is sometimes considerable. The opinion is commonly entertained that this disease always comes from Peru, probably because it generally makes its first appearance at some sea-port station. Epidemics of small-pox usually occur towards the end of the Winter, and from July to November, and it is observed that they assume a more malignant character as the weather becomes fine and warm, and the intervals of rain are longer. The mode of life of the lower classes, and the great want of cleanliness in their habitations, are circumstances favourable to the propagation of the disease; and under this head we must not omit to mention the deplorable maltreatment experienced by the sick, who are confined in the most secluded corner of the house, and dosed with all kinds of rubbish, large fires are lighted, all access of fresh air is carefully guarded against, and the poor patient almost smothered under woollen cloths—a proceeding, it may be remarked, which is observed in almost every case of illness. About 30 years ago, the Spanish government transmitted cow-pox matter to Chili by a man-of-war, but the indolence of the inhabitants has hitherto formed a serious obstacle to the introduction of a

* This excellent work was published not long ago, and is the subject of a highly laudatory article in a late number of the "Foreign Quarterly Review." The author is a talented, observant, and erudite man.

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general practice of vaccination. Companies, supported by the government, are now instituted; their object is to extend vaccination, and this benefit is conferred on the poor gratuitously. At 8 localities, a vaccinating physician has been stationed, with a yearly salary of from 240 to 480 duces, and one of these gentlemen, named Alvear, fortunately discovered the vaccine pustule in the cows of Chili. In the years 1828, 1831 and 32, an epidemic of a peculiarly malignant character prevailed, and the people, driven by fear, came in great crowds to be vaccinated, so that from 1830 to 1832, the total number of those vaccinated amounted to 37,834. The Indians suffer far more from the ravages of small-pox than the Chilians.

Acute diseases seem on the whole to occur but seldom, with the one exception of typhus, which here, however, is not wont to destroy the powers of life so suddenly as in other countries. In the towns and cities the mortality is greater than in the country. With respect to chronic affections, the secondary symptoms of syphilis are of the most frequent occurrence; in fact, lues venerea may be considered epidemical in Chili; yet such is the beneficial influence of the climate, that in this country, as indeed throughout the whole of South America, this disease, formidable as it is in northern Europe, is almost entirely divested of its terrors. The countryman pays attention to his diet, drinks infusion of sarsaparilla, and not infrequently recovers completely without the use of metallic remedies. In large towns, however, the disease is not so easily removed, which is partly to be ascribed to the empirical treatment adopted; for here, as in all other countries, how remote soever, of the extra-European world, LEROY'S celebrated panacea plays a very prominent part, and many other nostrums of Spanish origin are also high in favour. Among the Indians of Chili, lues is not common, and it does not appear to have been ever communicated to the races on the eastern side of the Andes.

It would seem that with the spread of civilization in Chili, diseases heretofore unknown, and which we may feel little disposed to regard as a consequence of our social condition, were at the same time introduced. Thus it is a fact that scarlet fever was not known up to 1831, when it suddenly broke out as a violent epidemic. Yet it was mild, for according to the report of the protomedicus, among 547 cases, there were only 25 exhibiting a malignant type (under the form of Febr. scarlat. miliaris), in which typhoid symptoms supervened. Of the latter 6 or 7 died, but of the whole number only a twelfth part terminated fatally.

The science of medicine has hitherto made but small advances in Chili, and it is only within a very recent period that really competent men have begun to enjoy some portion of public esteem. Twenty years ago medicine was practised by men of colour and the most ignorant quacks, the hospitals were entirely under the control of the monks, and the few well-informed physicians, those, namely, who had received an European education, found in Lima a more lucrative field for their exertions than was offered to them any where in Chili. This state of things, however, no longer obtains, for the number of physicians is now even greater than necessity requires, and there is a college at Santiago at which medicine is taught, although on a somewhat compendious plan. Still there is a scarcity of educated practitioners in the country, where the healing art is chiefly exercised by matrons and old Indian women. The country people are tolerably familiar with the virtues of the rather numerous indigenous plants, but to many of these properties are attributed which the individuals in question do not really possess, and many other remedies, supposed to be of great efficacy, are solely indebted for the estimation in which they are held to a credulous superstition. When any particular part of the human body is the seat of disease, the remedy is sought for in the corresponding part of some animal, variously prepared; thus, for ophthalmic disorders, the carbonized eyes of birds of prey are administered,

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the claws of the condor are given for gouty pains of the hands, and the flesh of the smooth-skinned lizard for scurfy affections of the skin. For the treatment of ordinary cases, the simple materia medica of the country suffices."—*Poeppig's Reise in Chile, Peru und aufdem Amazonenstrome. S.* 524—531.

The following case of poisoning with Muriate of Baryta is condensed from Henke's Journal of Legal Medicine. We have deemed it of some importance as exemplifying the action of that salt on the human subject in poisonous doses. Professor Christison observes that little is known on this subject, and that no account has yet been published of the morbid appearances as they occur in man.

Rare Case of fatal Poisoning with Muriate of Baryta. Communicated by Dr. Wach of Merseburg.

On the morning of the 4th of December, 1835, Charlotte M. aged 42, the wife of a manufacturing chemist residing in the country, in the absence of her master took half an ounce of the powder from a paper which she believed contained Glauber's salt, and having dissolved it in warm water, swallowed the whole at once. Soon after she was seized with nausea, retching, twitching of the facial muscles, and convulsive snatching of the hands and feet, to which succeeded a violent vomiting of a muco-aqueous fluid, which the servant in attendance threw away. These symptoms continued with increasing severity, the twitching of the face and of all the limbs grew rapidly worse, and, before the nearest physician had arrived, she expired under the most violent convulsions, scarcely two hours from the time of taking the salt.

Sectio cadaveris.—The body was rather fat, the mouth firmly closed, the features were distorted, and the fingers spasmodically contracted — abdomen and præcordia sunk. In the cavity of the abdomen the great and the small omentum unusually red, their vessels being filled with blood, the stomach contracted, and the vasa brevia turgid with blood—the peritoneal coat of the stomach of a dark brown colour and much inflamed. At the distance of 3½ inches (Parisian measure), from the cardiac orifice, and 9 lines from the smaller curvature on the posterior wall, there was a perforation of the coats of the stomach of an oval form, and measuring three lines in diameter on the external surface, and 7½ on the inner. The edges were very much swollen, and the mucous membrane for the space of two inches around was thickened and covered, not with pus, but a bloody mucus. The entire mucous membrane of the stomach was highly inflamed, and covered with mucus and coagulated blood. The muscular coat, with the exception of the place where the perforation existed, was no where softened or attenuated, but in a normal state. The cardia and pylorus, the duodenum, jejunum, and ilium, were all in a high state of inflammation, the mucous membrane softened, thickened, and smeared with a bloody mucus. The small intestines contained several ounces of a brownish-red slimy fluid, mingled with clotted blood. The colon throughout its entire length was morbidly contracted, so that its caliber was even one-third less than that of the small intestine. Many broad ecchymosed patches, from half an inch to an inch in length, were observed on its inner surface. The pharynx and œsophagus were slightly inflamed. The convex surface of the liver adhered throughout to the diaphragm, and the blood flowing from incisions in this organ and in the spleen was thick and of a very dark colour. In the gall-bladder was a pale-yellow gall-stone of the size of a hazel-nut; the gall itself pale-yellow and watery. In the uterus were many little clots of coagulated blood, the bloodvessels of the ovaries turgid, the external and internal parts of generation in the virginal state. The lungs and brain were congested with thick black blood.

It may be remarked that the fatal powder was fully proved to be muriate of baryta. Dr. Wach observes that the adhesions between the liver and

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diaphragm, the gall-stone, the morbid condition of the gall, and the contracted state of the large intestine, in all probability existed at the time the poison was taken, and that the appearances in the uterus and ovaries might be dependent on the menstrual discharge; but, he adds, all the other morbid changes, including the perforation of the stomach, were certainly occasioned by the irritant action of the poison.—*Henke's Zeitschrift für die Staatsarzneikunde. Fünfzehnter Jahrgang.*—1835.

In the 15th and last volume of Siebold's Journal of Midwifery, is a communication illustrative of obstetric medicine in Denmark, by Dr. Neuerman, the same from whose paper in a late number of Rust's Magazine, and which, it will be remembered, was also compiled from Danish sources, we formerly made rather copious extracts, which, under the title, "Scandinavian Contributions to Practical Medicine," appeared in the 47th number of this Review. For the cases which follow, we are again indebted to Dr. Neuerman; they are selected from his communication in Siebold's Journal, and will be admitted, we think, to posses no ordinary interest, exemplifying, as they do, that rare deviation from nature, extra-uterine pregnancy. The last case, indeed, was probably not one of this nature, though bearing much resemblance in its extraordinary course and termination to several recorded instances of extra-uterine pregnancy.

Case of Tubal Pregnancy, observed by Dr. Drejer of Copenhagen, Physician to his Majesty.

A mason's wife, aged 33, the mother of five children, and who believed herself to be in the 5th month of another pregnancy, having distinctly felt the movements of the child, though for a fortnight they had altogether ceased,—was suddenly seized, after a breakfast consisting of tea and biscuit, with a burning pain in the abdomen, speedily followed by rigors, vomiting, and great prostration of strength. A physician residing in the neighbourhood prescribed a julep to allay the vomiting, but being himself indisposed, he did not see her again. In the afternoon she was visited by Dr. Drejer, who found her in a state of syncope and with every sign of anæmia, although no blood had passed from her. On recovering consciousness, she complained of agonizing pain in the abdomen and of retention of urine. There was no distention of the abdomen, and on examination the uterus was ascertained to be in its normal situation with the os uteri somewhat open, whence Dr. Drejer inferred that his patient was mistaken in supposing herself pregnant, and, attributing her sufferings to spasms, he directed the julep to be continued with the addition of a little musk and liq. anodyn. She died quietly an hour afterwards.

Sectio Cadaveris.—On pressing upon the abdomen, a hard rounded body was felt in the hypogastric region. Within the abdomen was observed, first, a large quantity of extravasated blood; this being removed, the placenta was discovered; it presented the appearance of a convex fleshy body, and was inserted into the middle of the right fallopian tube, which was bursted; a fœtus of the female sex, weighing 6½ ozs., and attached to the placenta by the umbilical cord, lay among the intestines. The placenta was 10½ inches in circumference. It was remarkable that the broad ligament and fallopian tube of the right side did not pass off from the uterus as they normally do, but proceeded from that part of the organ immediately adjoining the neck. It was not possible to pass a probe through either tube. The uterus, which lay in its natural position, was somewhat enlarged, the cervix filled with a white gelatinous substance, the os tincæ open, and the uterine cavity rather dilated and lined by a thick pale membrane. A corpus luteum was found in the left ovarium, but with the most minute examination no traces of one could be discovered in the right, a circumstance sufficiently perplexing, for as every conception necessarily produces a corpus luteum, and as the one found was of the size and appearance usual in the

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5th month of pregnancy, it is not easy to conceive how the ovum could have got from the left ovarium into the right fallopian tube. It may be remarked that the patient in this case was subject to hysteria, and for some time had suffered from a pulmonary affection, but during this pregnancy, she had not complained of repeated attacks of pain in the belly, or of an impossibility of lying on the right side.

Case of Extra-uterine Pregnancy, which occasioned a complete retroversion of the Uterus, and did not terminate fatally. By Professor Drejer. Communicated to the Royal Medical Society of Copenhagen, on the 21st of February, 1833.

A woman, aged 36, of a thin and slender make, who in her 19th year had given birth to twins, and subsequently to two other children, the last of which was born 13 years before, was seized in June, 1831, after having passed one menstrual period without the occurrence of the usual discharge, with a violent spasmodic attack, attended with loss of consciousness. Antispasmodic medicines were administered, under the use of which she soon recovered. After the lapse of several months, during which the catamenia still continued absent, the epileptic paroxysm recurred, for which she was again successfully treated with antispasmodics. At this period the abdomen was tumid, and the breasts enlarged, and she had no doubt that she was in the fourth month of pregnancy. Her health continued tolerably good until the 25th of November, when she applied to Dr. Drejer on account of crampy pains in the belly and thighs. She was feverish, and had quite the appearance of having attained the 7th month of pregnancy; the breasts contained milk, and the movements of the child were perceptible. The symptoms of which she complained were relieved by pulvis refrigerans conjoined with musk, but some days afterwards suppression of urine came on, attended with straining and violent pain, and it was found exceedingly difficult to introduce the catheter, the orifice of the urethra being completely behind the pubis (a circumstance, as Dr. Neuerman remarks, which is regarded by Mende as a characteristic sign of retroversion of the uterus). By holding the instrument in a direction nearly perpendicular, it was at length passed into the bladder, much dark-coloured urine was drawn off, and alleviation of the symptoms followed. On examination through the vagina and rectum, the uterus was found to be completely retroverted; the os tincæ, raised above the pubis, could scarcely be reached by the finger, and a tumor was felt occupying the posterior part of the pelvic cavity; it had somewhat compressed the rectum, and yielded little to pressure in consequence of a superincumbent weight. Dr. Drejer was at first inclined to believe that his patient was not pregnant, but was convinced of the contrary by distinctly feeling the movements of the child through the abdominal parietes, and as it was clear that the tumor in the pelvis was the fundus uteri, and that it was impossible the os tincæ could occupy such a situation at the period of gestation to which this woman had arrived, he inferred that the case was one of extra-uterine pregnancy.*

The urine was drawn off twice a day, the accumulation of fæces obviated by the use of Glauber's salt, and, at the end of 14 days, the fundus uteri had evidently ascended towards the sacral promontory, and the os tincæ was somewhat lower; the excretions also were passed without assistance, and in the course of another fortnight, the uterus had nearly resumed its normal position. Gradually the movements of the child ceased. In January, 1832,

* Dr. Drejer does not seem to be aware of the fact that the uterus may remain in a certain degree of mal-position, with the os uteri still directed to, or raised above the pubis, even to the end of gestation. A case related by Dr. Merriman in the Med. and Phys. Jour. Vol. XVI. page 388, would convince him of this. We do not, however, impugn the accuracy of his diagnosis.—Tr.

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she had painful bearing-down efforts, accompanied by uterine hæmorrhage, but these symptoms vanished in a few days, and she at length so far regained her health as to be able to leave her bed, complaining only of weakness. In February, at the period when she had calculated on being confined, violent hæmorrhage and bearing-down pains again came on, but they ceased as before in the course of a few days, after which the distention of the belly and breasts diminished. The hard tumor, which still remained in the abdomen, extended from the symphysis pubis to beneath the false ribs on the right side, where Dr. Drejer believed he could feel the breech of the fœtus, the head appearing to lie below, and the back along the right side and anteriorly; a position which led to the supposition that the fœtus was sacculated in the abdomen, and not contained either in the right ovary or its fallopian tube. In April the catamenia appeared, and afterwards continued to recur at regular intervals; the woman is now in good health, attends to her business, makes long journeys on foot, and is not incommoded by the tumor farther than that it is occasionally the seat of shooting pains, particularly during the menstrual periods. She is also subject to hysteria. She was made acquainted with her situation, and assured that she might, notwithstanding, reach an advanced age.

Rare Case of Pregnancy, in which the Fœtus remained between two and three years in the Abdomen, and was at length extracted by an Operation. By Kjär, District Surgeon at Holstebroe, in Jutland. Read before the Royal Medical Society of Copenhagen, in 1833.

In the Summer of 1827, a woman ætat. 39, in her fifth pregnancy, experienced violent pains in the abdomen whenever the child moved, and the fear of approaching abortion induced her on several occasions to call in a midwife, who after examination declared her to be not pregnant. About the middle of December, when she had calculated that her confinement would take place, the ignorant midwife again declared that no pregnancy existed, although the movements of the child could be seen and felt, and affirming that the good woman was certainly bewitched, she finally left her to her fate.

For several days the violent movements of the child were still felt, after which they ceased altogether. The poor woman lay in the greatest torment, shrieking with pain, and it was necessary to hold her in bed. The abdomen was excessively distended, and so sensitive, that even the weight of the bed-clothes was unbearable. It was 8 weeks after this that she was examined by a physician, who brought away a fleshy mass which was considered to be a portion of the placenta: nothing more was done. In the course of 5 weeks she was able to leave her bed; in the Spring she could walk a little out of the house, and a quarter of a year after the cessation of the movements of the child, the catamenia appeared: she, however, felt weak and poorly throughout the whole of the following Summer and Winter. About the latter end of the succeeding Spring, a tumor formed below the umbilicus, and gradually attained the size of a goose's egg; it was opened by a pitch plaster in June 1829, and discharged a large quantity of an inodorous fluid. At this time, as the writer afterwards learned, a piece of flesh closed the opening and was taken away, upon which was observed something resembling a navel-string. The belly collapsed, but again became distended, and the opening healed up. In 6 weeks it again broke out, and gave issue to thick and highly offensive fluid, the discharge of which was not followed by a diminution of the abdominal distention. On the 26th of September, the patient was visited by the writer, who found her in bed in a state of exhaustion, with a quick full pulse and dry tongue, the bowels confined, and micturition difficult, the wound was painful, and she complained of nausea, which occasionally amounted to vomiting, in consequence of the excessively offensive smell of the discharge.

The abdomen was hard, sensitive,

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and uniformly distended, the opening below the umbilicus large enough to admit a sixpence (zweigroschenstück), and protruding through it, a macerated mass covered with hair. Herr Kjär having removed this substance with the scissars, felt within the opening a bone with a jagged edge, and on withdrawing his finger, a large quantity of a thick putrid fluid escaped, and then a mass resembling rancid oil. Nothing unusual was discovered by an examination per vaginam; the cervix uteri, indeed, was rather long, but not at all dilated, and the os tincæ sufficiently open to admit with facility a probe, which, however, could not be introduced into the cavity of the uterus. Herr Kjär resolved to dilate the opening in the abdomen, and the operation was performed on the 4th of October, the patient having been previously removed for the purpose into the town infirmary. At this time she was greatly debilitated. The hands and feet were œdematous, and a successful issue seemed extremely doubtful.

The patient being placed upon a bed, the operator dilated the opening in the direction of the linea alba to the extent of three inches, resting the scalpel first upon a director, and then upon his finger; the skull of the fœtus, previously opened with Smellie's perforator, was now extracted, and at length, with the assistance of this instrument and of the scalpel, the rest of the skeleton was removed. There were no traces of the after-birth or navel-string, with the exception of a piece of the latter, an inch and a half in length, which was attached to the umbilicus. The brain and intestines had also totally disappeared. The sac in which the fœtus was contained, was everywhere adherent to the surrounding structures; its parietes presented several osseous points, and at its lowest part was a kind of thick cartilaginous ring, with a depression in the centre containing a cleft. Much loose and putrid membranous matter was washed out by injections of tepid water, the edges of the wound were then brought together by a suture, and suitable dressings applied. After the operation (which occupied three quarters of an hour), two grains of musk in powder were administered every two hours, and a dose of a mixtura acida containing musk was given every hour. In the evening the patient complained of thirst and nausea, and the dressings required to be renewed on account of the profuse discharge. On the following days bark with elix. aromat. acid. was taken alternately with a musk mixture, and port wine diluted and warmed injected daily into the sac. Under this treatment the constitutional and local symptoms progressively improved, the vomiting ceased, the wound secreted healthy pus, and on the 13th of October she was able to leave her bed. The patient who for two years, during which she had borne the child, had continued to menstruate, ceased to do so after the operation, until on the 23d of November bleeding from the wound took place. In the evening there was a discharge of blood from the vagina, and at the same time that from the wound diminished. From this period the catamenia recurred at regular intervals through the natural passages. She is now in good health: the wound in the abdomen is still open, though the discharge from it is inconsiderable.

The writer is of opinion that the fœtus lay in the cavity of the uterus, that the cartilaginous ring at the inferior part of the sac, was nothing else than the cervix uteri, and the depression in it the orificium internum. Several circumstances, he thinks, corroborate this view of the case: from the commencement of the pregnancy, the abdomen was always uniformly distended, behind the sack nothing could be felt but the vertebral column, and after the operation the neck of the uterus ascended, and the os tincæ was firmly closed. The impossibility of birth in the natural way, he attributes to the cartilaginous state of the ring, in consequence of which the inferior part of the uterus was incapable of dilatation.—*Siebold's Journal für Geburtshülfe, Frauenzimmer und Kinderkrankheiten. Band* XV. 1835.

Proposal for Removing Mother's Marks.

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By Dr. Pauli, of Landau, in Rhenish Bavaria.

Dr. Pauli believes from the result of some experiments, that these unseemly discolorations may be removed by *tattooing*, and suggests the following method of performing this operation: The affected place is to be washed with warm water and soap, and then rubbed a little. The skin thus rendered tense, is to be smeared over with a colour (made of white lead and cinnabar), corresponding to that of the surrounding healthy skin, but of a tint somewhat brighter, and it is now to be repeatedly pierced with three needles tied together. They are to be introduced in a rather oblique direction, and so as to produce a little bleeding, and from time to time they should be dipped in the colouring matter. The extent of surface tattooed at a time should at first be small, otherwise there is much inflammatory swelling of the part. The pain is trifling. Dr. Pauli will, at a future time, communicate the result of his experience in this method of removing nævi.—*Siebold's Journal für Geburtshülfe, &c.*

STATE OF THE MEDICAL PROFESSION IN FRANCE, SINCE THE FIRST REVOLUTION TO THE PRESENT TIME.

One of the acts of the Revolutionary Destructives of France, in 1792, was the abolishing of all the existing universities, faculties, and learned corporations. Among the rest, the medical colleges were suppressed, and men educated and uneducated, licensed and non-licensed, were all and equally permitted to practise physic and surgery. Every town and village swarmed with the most impudent quacks, "qui distribuaient les poisons et la mort avec une audace que les anciennes lois ne pouvaient plus reprimer."

It was soon found by the government that this state of monstrous confusion could not with safety be permitted to exist, and that the old system, although full of defects, was infinitely preferable to the "mauvaise egalité," which had superseded it.

At the period of the abolishing act, there were no fewer than 18 medical faculties in the kingdom. Of this number indeed, nine only, those of Paris, Montpelier, Toulouse, Besançon, Perpignan, Caen, Rheims, Strasbourg, and Nancy, had for many years been efficient; and of these, the two first had long taken the precedence of all the rest; the remaining half, "n' avaient plus qu'un vain nom." All these eighteen faculties enjoyed the privilege of conferring degrees, and of admitting the graduates to medical honours. Besides them, there were other colleges of medicine in some of the principal towns; viz. at Amiens, Angers, Bourdeaux, Chalons, Clermont, Dijon, Lille, Lyons, Moulins, Nancy, Orleans, Rennes, Rochelle, Tours, and Troyes. These subordinate colleges, not having the right of delivering public instructions, and of conferring hohours, could be viewed only as corporations, empowered to bestow certain municipal privileges on those who practised within their immediate jurisdictions. The course of study prescribed at the different faculties throughout the kingdom was regulated by rules and laws which issued, either from the supreme council of state in Paris, or from the local authorities. The pupils were obliged to study for three or four years; and when candidates for degrees, they were subjected to public examinations, and were required to write and defend theses which had been assigned to them, by the professors.—The expenses attending the graduations did not exceed in all from 400 to 600 francs at the provincial schools, and 6000 francs at Paris. Besides these charges, there were certain fees, amounting to 100 or 150 francs, for their annual "inscriptions," during their residence in the metropolis.

The system of education, and the mode of obtaining honours, now mentioned, may probably be regarded as very satisfactory and highly judicious; and so it would have been, had the spirit of the enactments been truly acted upon; but abuse upon abuse had crept into every part of every institution, and had converted the "fair seem-

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ing" into a hideous reality.—There were "domini intra-muros," and "domini extra-muros;" there were "ubiquistes," and "bacheliers," "licencies," "agregés," "docteurs-regens," and "non-regens." In short, so utterly pervaded had the whole system become with the spirit and devices of priestcraft, that the grades of the medical profession resembled rather the orders of a priory, or of a monkhood, than the natural divisions of a society of men, who were to be engaged in constant intercourse with the world. Under the pretext of maintaining the discipline of the "corps," the members were watched, warned, and not unfrequently prosecuted, not only for heresies of medical opinion, but also for their theological tenets, and for their conduct in private life. It is not yet forgotten by some, what wars and rumours of wars were excited by the introduction of antimony as a drug, by the practice of innoculation, by surgeons daring to practise medicine, &c.: and so remiss and corrupt were many of the faculties, that all, with the exception of those at Paris and Montpelier, had become such easy almæmatres for "recipiendaires" or candidates, that it was no unfrequent occurrence, that a license, granting the "summos honores artis medicæ" was sent off by the post to an aspirant, who had never visited the place.* But these abuses, though worthy of deep reprobation, were not so bad as the chaotic confusion introduced by the Egalité men during the revolutionary madness, and which continued from 1792, until March, 1803, when an entire reform was once more felt to be essentially necessary. Like almost all the other legislative acts of Napoleon, the new laws, which were then introduced, were stamped with the impress of a most comprehensive and wise spirit; for while they still continued the existing privileges to those medical men, and midwives who were in actual practice at the time, all future aspirants were obliged to pass through a rigid course of study, and were subjected to severe examinations, before being admitted to the right of practising any branch of medicine.

Six colleges, at Paris, Montpelier, Strasbourg, Bourdeaux, Lyons, and Rheims, were instituted, and recognised as public government institutions, where full courses of medical lectures were appointed to be annually given; and which were invested with the power of receiving students, and conferring degrees of doctorate in medicine and surgery, "professions qui ne peuvent plus etre separées, depuis que leurs etudes sont fondées sur les memes bases et sur les memes principes." The candidates were to be examined, at distinct and separate ordeals, in anatomy and physiology, in pathology and nosology, in materia medica, chemistry and pharmacy, in hygiene and legal medicine, and on clinical cases, which were to be either "externe ou interne," according as the candidate aspired to a doctorate in surgery, or in medicine. The most objectionable part of the new system was the establishment of the "officiers de santé," a class of sub-educated and sub-privileged medical practitioners, resident in the villages and smaller towns, and who were permitted to attend in the less-important (or rather we should say, in what were wrongfully *deemed* the less-important) cases, and to perform only the minor operations of surgery and midwifery, unless a doctor was present and sanctioned his performance of the more serious operations. The candidates for this grade were, after serving six years "auprés des docteurs," or five years in some military or civil hospital, to be examined by a medical jury, established in each department of the empire, and which was composed of several doctors residing within its limits. Besides the two classes of medical practitioners, viz. the regular doctors, and the officers of health, the law of March 1803, recognized a third class, viz. that of the

* The corruptions of one country will generally find their counterparts in those of another: "eadem facies, eadem origo." Some of our Northern brethren will, no doubt, recognise where the family resemblance lies.—Rev.

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midwives; who, before they were authorized to practise, were required to have attended two annual courses of instruction at a public hospital, and to have passed certain examinations held by the same juries, as had the power of admitting the officiers de santé. On no occasion, however, were the midwives to employ instruments in cases of difficult labour, unless with the permission of a doctor, who had visited the patient.

Such is a very brief sketch of the law which came into operation about the end of 1803. Hitherto we have not alluded to the remuneration of the professors in the recognized schools. This was to be derived partly from a government grant, and partly from the produce of fees for inscriptions, examinations, and admissions of the students. The former amounted to 3,000 francs to each professor, and was paid from the bureau of the Minister of the Interior. In addition to this public payment, there was an annual grant to each of the colleges, for their incidental expences, such as for the support of their libraries and museums, the wages of servants, and soforth; 40,000 francs were allowed to the school at Paris, 30,000 to that at Montpelier, and 20,000 to that at Strasbourg.

These three schools received, in 1808, the title of Faculties, and were made subject to the Academies, in whose district they were placed. No important change in their organization took place, until November, 1822, when, in consequence of some disturbances in Paris, the Metropolitan Faculty was suppressed by the following Royal Ordinance.

"Louis, &c.

Considering that scandalous disorders occurred at the annual sitting of the Faculty of Medicine of Paris, on the 18th day of the present month, and that it is not the first time that the students of this school have been led into conduct which may be dangerous to the public peace; considering also that the imperative duty of the professors is to maintain a proper discipline, without which instruction cannot produce any benefit, and that the late events indicate 'un vice interieur,' in the organisation of the Faculty, we have ordained, and do ordain, that the Faculty of Medicine be suppressed, and that our Minister of the Interior shall present to us a plan for its re-organisation, &c. &c." In the following year, the remodelling was carried into effect. The faculty was made to consist of twenty-three professors for the various branches of learning: viz.—Anatomy, physiology, medical chemistry, medical physics, medical natural history, pharmacology, hygiene, surgical pathology (two professors), medical pathology (two professors), operations and apparatus, therapeutics and materia medica, legal medicine and midwifery, clinical medicine (four professors), clinical surgery (three professors), and clinical midwifery.* Attached also to the Faculty was to be a certain number of resident "agregés," or associates, whose duty it was to supply the place of the professors, in the event of their being prevented by sickness, or other cause, from fulfilling their duties. The associates were to be selected from those doctors of medicine, or of surgery, who had reached their 26th year, and they were arranged in different grades, according to their talents, and the periods of their service—"la durée du stage est de trois ans; celle de l'exercice de six ans; ceux qui l'ont terminé deviennent agregés libres."—The professors were to be appointed, for the first time at least, by the Crown, and two thirds of the agregés by the High Steward (le grand maitre): the other third was to be nominated at a concours held at the close of the first session. The election of a professor at any future time, was appointed to be made thus: three candidates, who must be agregés, were to be proposed by the Faculty, and three by the Council of the Academy; and the nomination was

* Since the date of this Royal Ordinance, other two Regius Professorships have been instituted; viz. a fourth one of clinical surgery (in 1829), and one of general pathology and therapeutics, (in 1831).

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to be vested in the High Steward. The Dean or President of the Faculty, was to be appointed by the same functionary, (the office of dean to be held for five years); and also the inferior officers, viz. the librarian, conservator of the museum, chemical assistants, clinical chiefs, chef des travaux anatomiques, prosecteurs, and aides d'anatomie.

In order that the regular attendance of the students might be assured, they were required to inscribe their names in a register (prendre inscription), during the first fortnight of each "trimestre;" but it is to be observed, that to be entitled to a "carte d'inscription," they were called on to produce certificates of their births, of their good conduct and manners (from the mayor and prefect of the "commune,") and also diplomas of bachelors of letters, and of sciences.*

At the end of every trimestre, it was ordered that a report of the proceedings of the Faculty should be made by the Dean to the Rector, and by the latter to the Lord High Steward, for the information of the Government. All reprehensible conduct, whether on the part of the professors, agregés or pupils, was required to be forthwith reported to the Dean, whose duty it was to take cognizance of it, and to inforce the immediate corrective. In reference to the former two classes, the 30th art. declared, "Tout professeur, tout agrégé, qui dans ses discours, dans ses leçons, ou dans ses actes, s'ecarterait du respect dû à la religion, aux mœurs, ou au gouvernement, ou qui compromettrait son caractere, ou l'honneur de la Faculté par une conduite notoirement scandaleuse, sera deféré, par le Doyen, au Conseil Academique, qui, selon la nature des faits, provoquera sa suspension, ou sa destitution, conformement aux statuts de l'université."

It will be perceived from the preceding details, that the entire regime of the French Faculty of Medicine was thus essentially subjected to, and ruled by the executive government of the state. We see that, by the fiat of one Royal Ordinance, the whole existing system may be at once abolished, and created anew at the will of the king and his ministers. When the new code was announced, there appeared at the same time a Royal Decree, nominating professors to the different chairs of instruction. Eleven of the former professors were re-appointed, and nine others were selected in the room of those, who by their conduct had drawn down the censure of government.

Such was the state of things from 1823, to the expulsion of Charles X. from France.

But, after the revolution of July 1830, Louis Philippe undid what Louis XVIII. had ordained; for he restored the expelled professors to their chairs, and excluded those who had been appointed by the ordinance of 1823 in their place.

All future appointments were ordered to be made by concours. The faculty of medicine, which had been abolished in 1822, was re-instituted with all its former privileges and honours.

The administration of the medical, and indeed of all other seminaries of education throughout France, is vested in the "ministre de l'instruction publique et des cultes."—*Jurisprudence de la Medicine, &c. en France.*

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* By a Royal Ordinance, dated 18th January, 1831, the scientific graduation was to be no longer a requisite preliminary.

Notice of some of the English, German and Italian Medical Museums. Cursory Remarks on Italian Medical Literature. Acknowledgment of Books received from Dr. Warburton of Palermo, &c.

Dr. Martins, during his visit to England and Germany in the course of last year, drew out a short description of some of the best anatomical museums in both countries, and communicated it to the pages of the Revue Medicale. He men-

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tions with praise the small, but "admirably arranged" museum at Oxford, and particularizes, as especially worthy of notice, a most beautifully injected preparation of the human testicle, presented by Sir A. Cooper,—and the Lilliputian-made foot of a Chinese woman: its extreme length, from the os calcis to the point of the great toe is four inches, and from the os calcis to the point of the little toe, only two inches.

In the museum, attached to St. Thomas's Hospital, one of the most interesting preparations which he saw, was a skeleton, exhibiting a remarkable universality of tuberculous deposition: the trochanters, the vertebræ, the sternum are affected with it; and of the soft parts belonging to the subject, the lungs, uterus, liver, pancreas and mesenteric glands, mammæ, integuments of the chest, the pectoral and intercostal muscles, the pleura and pericardium, and many of the lymphatics, exhibit traces of the same morbid change. In the same museum are preserved numerous valuable preparations, illustrating the phenomena of aneurism. There is one of an aneurismatic aorta opening into the jejunum; and another of a femoral artery, where the aneurismatic tumor had compressed the vessel immediately below, or plantad to itself, and had thus brought about a spontaneous cure of the disease. Among the specimens of diseased veins, there is one of the internal jugular, which has become so much distended, that the varicose swelling is nearly as large as a hen's egg.

At Guy's Hospital Museum, Dr. Martins' attention was directed more especially to the beautiful and valuable collection of drawings and wax models illustrative of cutaneous diseases. One of the wax models represents with admirable fidelity the rare disease, pompholix; the bullæ vary in size, from that of a pea, to that of a pigeon's egg; they are represented as filled with a reddish serosity. The disease had supervened on an attack of paraplegia, the result of fractured vertebræ. Dr. Addison, one of the physicians of the hospital, and who has been a pupil of the late Dr. Bateman, is entitled to great praise for his valuable additions to this department of the museum.

We regret that Dr. Martins has taken so short a notice of that museum, in some respects the most extraordinary one in the world, which was made by the late John Hunter, and now constitutes the museum at the College of Surgeons in London.

The labours of British anatomists, in the field of comparative anatomy, are but very little known on the Continent; and although we must confess that of late years they have been, when compared with the deeds of Cuvier and of others in France and Germany, but as the Arab hut beside the mighty pyramid, it is ever a proud satisfaction in our humility to lean back upon the bulwark of Hunter's name. The almost incredible achievements of this one man have been, hitherto, almost a sealed book, not only to foreigners, but to most of his countrymen; and we cannot therefore wonder much that in the historical reviews, or sketches which have of late years been so frequently and ably drawn up by many French and German authors, the value of the Hunterian Museum has been so imperfectly appreciated.

It is to be hoped that the labours and discoveries of Hunter may be henceforth better known and prized, now that not only a copious and descriptive catalogue is publishing by the College of Surgeons, under the able superintendence of that excellent anatomist Mr. Richard Owen, but also a new edition of Hunter's works (which is to contain in addition to all his published writings largely annotated, numerous manuscripts and detached memoirs, as well as the substance of Sir E. Home's Lectures on Comparative Anatomy, which, it is well known, were drawn from Hunter's notes) has been promised to the medical world. To recur to Dr. Martins' notes, we find him stating that to examine the Hunterian Museum in detail, "il faudroit lui consacrer au moins trois semaines." This accidental remark is more highly laudatory, than the most laboured eulogy. He notices in particular the skele-

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ton of the gigantic Irishman who was eight feet in height; the preparation of the pelvis of the negro woman, on whom Dr. Steevens performed successfully the operation of tying the internal iliac; the thorax of a patient who recovered after the frightful accident of a carriage-shaft having been driven fairly through it, from one side to the other; and the preparations of the genital and mammary organs of those singular animals, (whose proper place in the zoological scale has been such a perplexing problem) the ornithorynchus paradoxus, and the echidna hystrix, which have been at length satisfactorily proved by Mr. Owen to be truly mammiferous.

The German museums, which Dr. Martins visited, were those of Heidelberg and Strasbourg. The former has of late years been splendidly enriched by the labours of Tiedemann, Arnold, Fohmann, &c. The preparations of the nervous system are extraordinarily beautiful; and of these, more especially some which display the "ganglion oticum, seu Arnoldi," and others which shew the nervous supplies of the uterus.

In several preparations of the lymphatic system, the mercury has passed from the mesenteric lacteals into the branches of the vena portæ: this phenomenon has been noticed in the human subject, also in the seal, in several dogs, and in the large tortoise. We are told "that all the intestinal lymphatics seemed to be collected at the spleen, which was thereby quite covered with a mercurial network." These preparations tend to confirm the opinion of Tiedemann, that the spleen is to be considered as a huge lymphatic ganglion, whose office is to assimilate the chyle with the blood.

At the Strasbourg Museum there is a curious preparation, which exhibits the presence of four spleens in one subject. M. Lauth mentioned to Dr. Martins that in all his experiments of removing the spleen from animals, there was a new supplementary one formed, or forming, provided the animal survived, for a sufficient length of time, this severe operation. If this statement be correct, the hypothesis of Tiedemann certainly seems to be not improbable.

The anatomical museum of Strasbourg owes much to the exertions of Professors Lobstein, Lauth, Ehrmann, and Aronsohn: the pathological department is especially rich and valuable, and is now one of the most complete collections in Europe. There is a remarkable specimen of a sternum bifurcated in its upper half; the clavicular articulating surfaces are at least three inches and a half apart from each other. Among the vascular preparations, there is one of the arch of the aorta being bifurcated and again re-uniting; the trachea and œsophagus pass between the limbs of the bifurcation. Dr. M. says, "il n'existe que deux exemples de cette disposition; celui du musée de Strasbourg se rapporte à l'année 1777." Among the intestinal preparations, one of a very extensive invagination is especially worthy of notice; the extremity of the ileum, the cæcum and its valve, and also the transverse part of the descending colon are introsuscepted within the rectum, so that the vermiform appendix of the cæcum is not more distant than two, or three inches from the anus, and had been supposed, during the life of the patient, to have been a polypus recti. In another bottle, there is preserved a portion of the small intestines, fully a yard in length, which had been passed by the rectum after an attack of ileus: the gut is of a dark colour, but is not gangrenous. The patient, a young girl, recovered completely from the attack; but unfortunately four months after the cure, she eat a quantity of cherries and their kernels, and a violent colic, with most severe tormina, was induced: the intestinal cicatrix gave way, and, the contents of the bowels escaping into the abdomen, death speedily followed.

To the preceding short notes drawn from Dr. Martins' paper, it may be interesting to subjoin a few of the observations on the Italian medical schools, made by M. Roux in his late visit to the South. The anatomical museum at Pavia, he says, is rich and extensive, and is especially valuable for the numerous beautiful preparations, by the late Professor Scarpa, of the minute anatomy of bones, of the parts con-

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cerned in hernise, and of the arterial anastomoses in healthy and in diseased conditions.

The admirable preparations of the nerves and lymphatics made by M. Panizza* (an anatomist worthy of being the successor of his great countryman Mascagni) must arrest the attention of every stranger. One of these exhibits a beautiful demonstration of the mode of connexion between the filaments of the great sympathetic nerve, and the spinal nerves. What however attracted M. Roux's notice in an especial degree, were several preparations of the blood-vessels of serous membranes.

It is generally known that many anatomists have questioned the presence of blood-vessels in these membranes, and that they have considered them as a sort of epidermis, under which the vessels and nerves are situated. "I confess," says M. Roux, "that I was always unwilling to assent to this doctrine, although I could not satisfactorily to my own mind disprove its correctness. Since I have examined preparations in the museum of Pavia, all my doubts have been completely cleared away. Some of these preparations exhibit the serous membranes unravelled in the most curious manner, and penetrated with blood-vessels filled with fine injection. The vascularity of these membranes is henceforth, to me at least, a fact of incontestable demonstration."

With respect to the collections of pathological anatomy in Italy, M. Roux talks of many in terms of very high approbation. He takes occasion, at the same time, to reprove his own countrymen for their remissness in not preserving the numerous specimens of morbid changes, which are daily examined in the large hospitals of Paris. It is a fact perhaps not generally known, that there is not in France a pathological museum equal in richness and extent to several private ones in England, Germany and Italy. We believe that the one at Strasbourg is the most extensive and the best arranged of any in France.

M. Roux is entitled to much praise for his candour, in avowing a national failing, and in admitting the superiority of strangers; and we have the more pleasure in alluding to his conduct in this respect, because it is of so very rare occurrence among his countrymen. His words are; "in Italy pathological anatomy is cultivated with much less egotism, than with us in France. We have indeed done much for science, but very little for those who pursue it, and who may wish to verify recorded facts. Nowhere have we any collection that deserves to be mentioned at the same time with many in foreign countries; and it will take a considerable time, and not a little labour, before we can hope to vie with most of our neighbours in this respect."* The museum at Florence contains some very curious preparations. There is a cranium, which had been so fairly transfixed with a dagger, that its point projected nearly an inch beyond the inner table of the bone. The patient survived for a long time, "portant le fer enclavé dans le crane."

There is also the uterus of a woman, who had undergone the Cæsarian operation twice. She had died in consequence of the second. M. Roux makes some remarks on the state of surgery in Italy, and expresses an opinion that there appears to be a reluctance to adopt many of the improvements, which have of late years been

* We propose in our next number to call the attention of our readers to the discoveries of this excellent Italian anatomist, in our review of M. Breschet's recent work on the Lymphatic System.—*Rev.*

* Since this was written by M. Roux, the museum founded and endowed by the late Baron Dupuytren, has been established in Paris. It already contains many valuable pathological preparations, and it may speedily be made worthy of the French school of anatomy, which has deservedly stood so high for many years. It would be difficult to match such names as Bichat, Cuvier, Beclard, Cloquet, Cruveilhier, Andral, &c. in any other country.

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introduced into this branch of the healing art by the French school.—Thus lithotrity has been practised only once, by a surgeon at Florence. The doctrines and precepts of Scarpa are almost exclusively paramount in every school; and seldom is a deviation made from the treatment which this distinguished surgeon has inculcated in any particular disease. Thus the operation of extracting the cataract is seldom or never attempted under any circumstances; Scarpa's mode of couching being almost invariably adopted.

We must here take a rather abrupt leave of M. Roux and his rambling notes; but before quitting the subject of Italian schools, we are anxious to fulfil a duty, which it has been long our purpose to do—viz. to acknowledge with many thanks the receipt of several works, published at Palermo in Sicily, from Dr. Warburton resident there.

Without further apology, we introduce the 'ipsissima verba' of the short notice of them, which we drew up many months ago.

We received lately, from Dr. Warburton of Palermo, the following works published there within the last two or three years; the first vol. of a Corso Completo di Anatomia Descrittiva, by Signor Gorgone, Professor of Anatomy in the University; a pamphlet on the preservation of subjects for dissection; two clinical surgical reports; a lecture on fungus hæmatodes, or encephaloid tumor,—all from the pen of the same gentleman.

We are also indebted to Dr. W. for a copy of the Regulations of the Royal Lunatic Establishment, founded a few years ago at Palermo, and two memoirs on subjects connected with insanity, by Dr. Silvestri.

Our best thanks are due to Dr. Warburton for his kind attention in sending for our inspection the above works, and we have only to regret that they did not reach us sooner.

There is a great difficulty in procuring Italian medical books in London, or we should take more frequent opportunities of communicating to our readers the state of professional literature in a country which may boast of such distinguished men as Morgagni, Baglivi, and Scarpa. It is, therefore, especially gratifying to us to receive from our readers abroad any of the productions of the foreign press. Some of our cotemporaries have of late been making a prodigious parade of their deep read lore in all the living languages of Europe, and not satisfied with the French, German, and Italian journals, they have been ransacking (at least they tell us so), the Russian, Swedish, Danish, &c. periodicals to serve up some marvellous tale upon subjects never heard of before in this country.

We do not profess to be such universal linguists, and perhaps our readers would not thank us for regaling them with mere frothy announcements of the titles of books, without telling them any thing of their contents. Our aims and efforts are very different.

The communication of all important physiological and pathological discoveries, and of all substantial improvements in practical medicine, is what we aim at doing—this is the great object of our labours. As a matter of course, our own literature will always receive the chief attention from us, not only because it is quite natural that we should be more interested in domestic than in foreign productions, but also because we are well aware that English thoughts and English sentiments will always make a greater impression on English readers, than the thoughts and sentiments of foreigners. The English are so truly and so strictly utilitarians in all they do, and in all they think of, that unless something tangible, something which can be proved to be true, and which may lead to practically beneficial results, be presented to them, they quickly turn away from the displays of book knowledge, however ingenious and recondite. It is the solid substantial food which they ever have preferred, and always will prefer, to the elegant trifles and soufflèed confitures of continental production. In justice to the Italians we must confess, that the little which we have read of their medical productions has, in some respects, left a more favourable impres-

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sion on our mind, than that which we have of either the French or the German literature. There seems to be less of wearisome detail about unimportant matters, and less proneness to vague theorising in their writings.—The almost unequalled excellence of the Italians in some branches of science, of art, and of literature, might lead us to anticipate the most pleasing hopes of their success in any department of philosophy to which they will direct their attention; and we verily believe that it requires only the vigour and energies of the Italian mind to be liberated from the stupifying enthralment of a bigotted superstition, and of an illiberal despotism, for it to assume, perhaps, the foremost rank in the investigation of medical as well as of other truths.

Gifted with more lively perceptive, and more richly imaginative powers than the English, but inferior probably to them in patient industry and in calm reflection, the Italians are free from the transcendental mysticism of the Germans on the one hand, and from the ever-changing credulity of the French on the other. We should gladly embrace every opportunity of studying the writings of the Italian physicians, and of communicating the results of these studies to the British public, if there was a greater facility of procuring them; but they are really not to be had in our London shops, and when ordered from Paris, we have been sometimes obliged to wait for upwards of a year before we have received any answer. We need not, therefore, repeat our assurance to Dr. Warburton, and to others similarly situated, that we shall ever regard it as a great favour, if they will occasionally transmit to our care any of the more esteemed works published in the countries, where they reside.

The first volume of the Corso Completo di Anatomia, is occupied with an account of the bones and ligaments. The anatomical details are minutely and very faithfully given, and great attention has been paid to the description of the various changes which each bone undergoes from early infancy to mature age. As this is quite an elementary work, it cannot be expected that we should give an analytic review of its contents.

If our opinion is worth aught to Dr. Gorgone, we may assure him that we have read the first volume of his anatomy with much pleasure, and that we regard it as an excellent manual, full of correct and valuable descriptions. We have introduced some of the practical contents of the shorter works in our subsequent pages, under that division of pathology to which they may appertain.

ON THE CHEMICAL PROPERTIES OF THE SECRETIONS IN HEALTH AND IN DISEASE; AND ON THE EXISTENCE OF ELECTRICAL CURRENTS IN ORGANIZED BODIES, INDUCED BY THE ACIDITY AND ALKALINITY OF THEIR DIFFERENT MEMBRANOUS SURFACES.

M. Donné, whom we have had repeatedly occasion to mention with praise, is the author of some curious—would that we could add, well-ascertained—statements on this subject.

All that we propose to do, is merely to present to our readers the leading results of his enquiries. They are contained in the following corollaries.

1. The whole of the tegumentary surface secretes an acid humour. It is however to be noticed that the sweat, instead of being, as it is generally stated, more acid in the axilla, and around the organs of generation, than in other parts, is frequently of an alcaline character.

2. The alimentary canal, from the mouth to the anus, except the stomach, (the gastric juice of which is strongly acid, as has been proved by Prout, Tiedeman, and Gmelin,) secretes an alcaline mucus. Thus the saliva, and also the mucus of the pharynx and œsophagus as far as the cardia, and of the intestinal canal from the pylorus to the anus, are alcaline in health; and become acid, only in consequence of disease.

3. The serous and synovial mem-

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branes secrete an alcaline fluid: in disease, it sometimes becomes acid.

4. The external acid, and internal alcaline membranes of the body, represent the two poles of a galvanic pile, whose effects are appreciable by a galvanometer. For, if one of the conductors of this instrument be placed in contact with the mucous membrane of the mouth, and the other conductor be applied to the skin, the magnetic needle will be found to shew a deviation of from 15 to 20, or even 30 degrees; and the direction of the needle proves that the mucous or alcaline membrane indicates a negative electricity, and the cutaneous or acid membrane a positive electricity.

5. Independently of these two great surfaces, exhibiting opposite electrical states, there are other smaller cognate systems, which are similarly opposed. Between the stomach, for example, and the liver, we may discover energetic electrical currents.

6. The acid humours of the system may become alcaline, and the alcaline may become acid, in a state of disease.

7. An abnormal acidity is usually the result of a phlegmasia; and this change may take place in an organ, at a distance from the inflamed part;—thus the saliva becomes strongly acid in gastritis.

8. The acid, developed during the existence of inflammatory disease appears to be most frequently the hydrochloric. The presence of this acid may very possibly determine the coagulation of the albuminous part of the lymph, or serosity, which abounds in all inflamed structures; and we know that this coagulation is the cause of the false membranes in the inflammation of serous membranes, of specks and opacities of the cornea, and of the induration and hypertrophy of many parenchymatous organs.

Purulent matter is produced by the action of an acid upon albuminous lymph:—it is a species of combination of acid and of albumen. Although we cannot always discover traces of a free acid in inflammatory effusions, and although pus does not always redden the blue paper of turnsol, we are to remember that by far the greater number of the humours of an animal body in health are strongly alcaline, and that in this way the generation of acid in disease may be masked or concealed for some time, in consequence of the neutralising effects of the original or primary alcali.

9. The alterations in the chemical nature of the secretions must necessarily react on the different functions of the system. They will be found to constitute an interesting groupe of lesions, or symptoms, hitherto but little regarded, and the diligent investigation of which may very possibly lead to some important therapeutic results.

These changes will probably be found to induce certain modifications in the electrical currents, which exist between the different organs of the economy.

Researches on some of the Properties of Pus and of Blood—Mode of distinguishing the Globules of these two Fluids—Effects of Admixture of Pus with the Blood.

M. Donné has contributed a very ingenious and valuable memoir on the above subjects to one of the most esteemed of the French Journals. It merits an attentive perusal from the pathologist, as some of its statements tend to elucidate the history of those very obscure cases, in which the mass of blood appears to be, as it were, poisoned by the admixture of purulent matter, and in which there is a marked tendency to the deposition of pus in some inward parts, such as the parenchymatous viscera, the joints, &c. without any previous inflammation of these parts. To this state of the blood, M. Piorry has recently given the name of "pyohemie," or "entorrhée pyohemique." We shall make a few extracts to exhibit the spirit of M. Donné's memoir.

Pus, whatever be its colour, consistence, and smell, has always exhibited in my experiments the following character:—

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1. Treated with concentrated ammonia, it is converted into a transparent and very tenacious jelly. A small portion of pus, when mixed with a considerable quantity of water, continues to shew this property. Sometimes it takes a short time before the change is complete; but by stirring the fluid with a glass rod, the gelatinous transformation is speedily apparent. I have never failed in obtaining this result with all the varieties of pus. A watch-glass is the most convenient vessel in which we may perform the experiment.

2. Examined with the microscope, pus, whatever be its character, appears as a fluid in which there floats a number of globules, all of the same size, and all having a diameter nearly double of that of the blood-globules.

When the pus becomes decomposed and putrefied, the globules separate from each other, and at length they appear to be dissolved; but this change takes place very slowly and tediously—six or eight days at least are necessary. That the globules of purulent matter are not dissolved by the action of the strong ammonia, may be readily ascertained by the microscope.

The property of pus, to be converted into a gelatinous substance when treated with concentrated ammonia, has been noticed by M. M. Andral, Gendrin, and others; but these authors do not seem to have attached to this property, as a diagnostic sign or indication, the importance which it deserves. We are inclined to believe that, by this character alone, we may almost always distinguish pus from every other animal fluid. Thus the serum of the blood, the saliva, the bile, the urine, a solution of albumen, &c. do not exhibit it; whereas a very small quantity of pus mixed with water becomes, on adding some drops of ammonia, either immediately, or after the lapse of a few minutes, ropy and of a glairy consistence, not unlike to the white of an egg, or to one kind of bronchial sputa.

Although in the present day we do not attach the same importance to the discrimination of pus from mucus, which physicians were some years ago in the habit of doing (when it was supposed that the presence of pus is always indicative of actual ulceration), yet it must be very desirable to be possessed of a means of distinguishing the one fluid from the other. M. Donné assures us that he has always succeeded in his diagnostic trials by using the above test. He introduces some of the sputa to be examined into a glass tube, closed at one end, adds a small quantity of water, and shakes the mixture well together.

It is worthy of notice, that this simple experiment alone will often suffice; for, as M. Gendrin observes, "of all the chemical analyses of pus, that which is most important and which best deserves our confidence, consists in the mere dilution and agitation with pure water—the pus gradually subsides, and the yellowish pulverulent (?) substance (la substance pulverulente jaunatre) which is precipitated, has all the physical properties of pus. But the value of this experiment is greatly enhanced, if we conduct it in the following manner. Put some of the diluted pus into a watch-glass, and add a few drops of concentrated ammonia: the appearance of the gelatinous change is immediately, or very speedily obvious. If the sputa contain no pus, but mucus only, the fluid remains ropy—the ammonia having no power to destroy the viscidity of mucus—but it does not become glairy and tenacious, as it does when pus is present.

M. Donné says that in some cases of diseased urinary organs, the admixture of semen with the urine may simulate the appearance of purulent matter. The ammonia renders the semen less viscid than it is in its natural state; but the best test for discriminating the one fluid from the other is the use of the microscope. The form of the spermatic animalculæ is quite peculiar and characteristic. A case in point occurred in the clinical wards of La Charité lately. A quantity of milky urine was taken from the bladder of a man who had died from encephaloid cancer of the stomach and bladder, and who had experienced considerable dysuria. It was doubtful whether this whitish urine contained pus or not. Examined by

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the microscope, a very large quantity of dead spermatic animalculæ was at once discovered, and when strong ammonia was added, no gelatinous change took place.*

With respect to milk, when treated with strong ammonia, it is worthy of notice, that its globules are not at all affected by it; and this negative property affords a useful and easy test to separate and to distinguish milk from blood or serum, when it happens to be mixed with either of these fluids—the blood globules being at once dissolved by the strong ammonia, and the milk globules remaining intact. The milky fluid, which is secreted during the first day or two after delivery, and which is known by the name of "colostrum," has a greater analogy, in its relations with ammonia, to pus, than any other animal fluid which M. Donné has examined. When the volatile alkali is added to it, it immediately becomes viscid and tenacious, and is converted into a glairy mass.

The serum of the blood, separated from the coagulum, is little, if at all affected, at least visibly, by the ammonia. But the blood itself, when it has not yet separated into its component parts, and is still a homogeneous fluid, is acted on by ammonia in a manner very similar to that which the alkali exerts on pus: at least this test does not enable us to distinguish blood containing pus, from blood which is pure and free from admixture. Blood, when treated with strong ammonia, is changed into a viscid jelly, not unlike to red currant jelly, The circumstance, therefore, of blood and pus being similarly affected by ammonia, renders the separation of these two fluids a very difficult problem. The microscope fortunately here lends its assistance. The size and form of the globules of pus is very different from the size and form of the blood-globules —the former are larger, have no central nuclei, are not flattened, but are altogether globular or spherical, and their edges are less even and smooth, than we find to be the case with the globules of the blood. To add assurance to this experiment, it will be always prudent to try the ammonia test on the fluids under the microscope, as recommended by Müller in his Memoir on the Blood, published in the Annales de Physique et de Chimie de Berlin, 1832. The strong ammonia (or a solution of caustic potass) attacks not only the colouring envelopes of the blood-globules, but also dissolves their nuclei. We have already said, that the pus globules are not affected in this manner.

In examining the state of the blood, M. Donné recommends the physician to conduct his experiments in the following manner:—Put a drop of the blood, to be analysed, between two thin plates of glass, and examine it attentively with a microscope. If the globules are uniform and alike in every respect, we may conclude that the blood is free from any foreign admixture. On the contrary, should we observe any globules of a larger size and of a different shape from the others, our attention should be directed to ascertain their true nature. The irregular globules may be either globules of pus, or merely some of the blood-globules, which have become changed in consequence of commencing putrefaction, or of some other cause, which at present we do not well understand. In these circumstances, the application of some strong ammonia will solve the difficulty. If there be no admixture of any pus globules with those of the blood, the ammonia causes all the globules to disappear instantaneously, and nothing now is seen between the glasses, but a few straggling filaments, probably of fibrine. If, on the other hand, there are any pus-globules, these remain quite unaffected by the ammonia.

M. Donné closes his memoir by alluding to the effects which the admixture of pus with fresh blood has in inducing a dissolved and diffluent state of the coagulum. The blood coagulates

* M. Donné very justly remarks that the examination of animal fluids, morbid and healthy, with the microscope, has been hitherto too much neglected, and that, if properly conducted, some very useful results might be obtained.

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at first nearly as usual; but in the course of a short time—eight, twelve, or twenty hours—the coagulum becomes soft, until at length it is again entirely fluid. The larger the quantity of pus mixed with the blood is, the more speedily do these changes take place.

This solvent effect of purulent matter on the state of the blood deserves to be studied with attention, as it may afford an explanation of some obscure pathological phenomena. We know that, in fatal cases of purulent absorption, the blood is often found to be in a fluid and very diffluent state. So it is also in some malignant fevers, and among these more especially in small-pox. Lister long ago remarked, "in multis autem variolis, quibus urina cruenta mota est, sanguinem e brachio missum adeo aquatum, putridumque esse vidi, ut fluctuaret crassamentum in vase non aliter quam ipsum serum." Perhaps, too, the very rapid formation and deposition of large quantities of pus in certain cases, may be connected with the peculiar property of this fluid to alter and infect the state of the circulating mass, rendering it more liquid, and destroying, in some degree, its tendency to coagulation.—*Archives Générales, Aout*, 1836.

EXTRACT FROM A LECTURE BY M. SERRES ON SOME POINTS IN ORGANOLOGY—THE PREDOMINANCE OF THE RIGHT OVER THE LEFT SIDE OF THE BODY.

"The law of the predominance of the right over the left half of the body, is applicable to and is exemplified by all the organisms. Its influence is visible even in the lowest tribes of animals—in the infusoria as well as in the mollusca, and among these, most conspicuously in the gasteropedous family. Pathology also furnishes numerous examples of the operation of this law. For example, supernumerary parts are more frequently observed in the right than in the left side; and, on the other hand, defective formations are more common in the latter than in the former. Among the viscera, the liver exhibits a very marked instance of this inequality of development.

In the early stage of its growth, it is nearly symmetrical, the two lateral lobes not differing much in size; but in the fifth or sixth month of intra-uterine existence, the right lobe begins to acquire that decided superiority of development, which it ever after retains, at least during health. In certain diseased states, this predominance is sometimes lost, in consequence of the two lobes being unequally affected. Thus, in hypertrophy of the liver, we generally find that the enlargement affects the left more than the right lobe. By the result of this morbid action, the primitive form of the embryotic liver is reproduced, and the organ returns to the point whence it started (l'organe revient au point d'ou il etait parti); but it returns under the influence of an operation, which is normal in uterine, but abnormal in extra-uterine existence. In the former case, the state of the liver is one of the conditions of embryotic life; whereas, in the latter, it becomes the cause of death, *because extra-uterine life cannot accommodate itself to the conditions of intra-uterine life.*

It sometimes happens that the organic conditions which appertain to, and which subserve the support of extra-uterine life may be prematurely developed in the fœtus. The consequence of this anomaly is, that the fœtus perishes by the very organic arrangement which is necessary to the continuance of its extra-uterine existence. For example, we may mention the closing of the foramen ovale, or of the ductus arteriosus before birth:—the child dies in the uterus, in consequence of a premature development of certain organisms. In cases such as we have now alluded to, it might, without a minute examination, be supposed that the crime of infanticide had been committed. This subject deserves, therefore, the strict attention of the medical jurist, who, in all that regards infanticide, has need of the steady light of anatomical and physiological science.

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But to return to the topic of the predominance of the right over the left side, the following pathological illustrations of this law of organisation may be deemed interesting. Out of 20 cases of coxalgia, 18 will be found to occur on the right side. On the other hand, almost all the examples of spontaneous luxation of the hip have been found on the left side. The same law holds good as regards the tardy descent of the testis. This malformation occurs twenty times at least in the left groin for once that it does in the right. Hitherto surgeons have not attended to such details, as the relative frequency of disease on the two sides of the body; but it is a topic full of interest, and perhaps of practical utility. Fistula lacrymalis is greatly more frequent on the left than on the right side; and the only probable conjecture which I can form as to the cause of this difference is, that there is "une inegalité du developpement des deux canaux nasaux." If we compare a multitude of skulls, we shall find that the left nasal canal is rather more contracted than the right one. This fact affords a rational explanation not only of the greater frequency of the disease on the left side, but also of its more easy curability on the right than on the left side."—*Lancette Française.*

Examples of Double Uterus.*

Before alluding to any of the recorded examples of this structural anomaly, it is proper to premise that two malformations, very different from each other, have been designated under the title of double uterus. There may be either two separate and distinct uteri terminating by different orifices in a common vagina; or only a single uterus divided into two compartments by a longitudinal septum or partition.

Bauhinus has narrated two cases, in each of which the womb contained a double cavity. He, naturally enough in those days of imperfect anatomical knowledge (1599), imagined that the plurality of infants in certain pregnancies may be connected with this irregular formation of the uterus. Riolanus in his Anthropographia mentions that he examined the body of a girl, in whom "ab orificio externo duplici, usque ad fundum uteri, duplex erat matrix, mediano pariete secreta."

One of the most authentic and most accurately narrated examples is that, which occurred in 1681 to Dionis. A young lady died during the sixth month of her first pregnancy. On examining the pelvic viscera, Dionis found that there were two uteri, distinct from each other, but having one common cervix. Conception had taken place in the left uterus, which was found ruptured at its fundus. We are told that this singular malformation was exhibited and explained by Dionis to the Queen and Dauphiness of France, the patient having been one of the women of the royal bedchamber.

It perhaps deserves to be noticed that the catamenia continued in this case to appear during the first four or five months of pregnancy.

M. Littre has related in the memoirs of the Royal Academy of Sciences for 1705 the dissection of a girl, in which the uterus was divided into two distinct cavities, by a septum which extended a short way into the vagina, so that there was a separate opening from the canal into each uterine cavity.

In another case reported in the 5th vol. of Haller's Thesis, the septum did not extend into the vagina: the cervix uteri however was divided into two passages.

In a rare and very interesting work published in 1752 by M. Boehmer, professor of anatomy at Magdeburg, there

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* The memoir, from which we draw our account, was written by the late M. Louis, and read before the Royal Academy of Surgery in April 1790, but it has never been published. M. Louis was perpetual secretary of the Academy. Many examples of double uterus have, it is well known, been noticed since the date of this memoir. There is a good description of such a case in the Medical Gazette two or three years ago, by Dr. Lee of London.

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is a well drawn up report of a "uterus humanus bifidus et bicornis cum vaginâ duplici." The woman died at the age of 52. She had been married when young, but the consummation of the marriage, we are told, could never be effected, in consequence of the irregular formation of the vagina.

In 1752 M. Bagard published an interesting case of double uterus which he discovered in a woman, who had miscarried fourteen times. On one occasion, she miscarried of twins in the fifth month of pregnancy. There were two distinct uteri conjoined by a common cervix, and opening into the vagina by a common orifice. The two uteri were nearly of the same size.

In Haller's Opuscula Pathologica there is a short account of the dissection of a girl, in whom were found two uteri, each of which was provided with a corresponding vagina. The great physiologist,* in reference to this case, remarks—"Dubium vero non est, quin potuerit in ejusmodi puellâ fieri conceptus post conceptum, atque adeo superfœtatio perfecta locum habere."

In 1772 M. Martin read before the Academy the history of a dissection of a woman 28 years old, in whom he discovered a double opening in the hymen, and two vaginæ, which were parallel to each other, and which terminated in two distinct cavities of one uterus.

In 1781, M. Berthollet mentioned to the Academy the case of a woman, who had borne a mature child 10 years before her death, and in whom he found two distinct uteri; one situated on the right side and the other on the left, but having a common cervix and therefore only one os tincæ. The right uterus was rather larger, and of a more spongy texture than the left uterus, and it was therefore conjectured that the conception had taken place in the former.—*Archives Générales.*

EXAMPLE OF TRIPLE KIDNEY IN THE HUMAN SUBJECT.

A sailor, 39 years of age, died of an adynamic fever in the naval hospital at Oranienbourn. On dissection, the left kidney was found of an extraordinary size, but in respect of situation, colour, consistence, and the insertion of its blood-vessels and nerves, it was perfectly normal. The right kidney, the structure of which was altogether healthy, was situated opposite to its fellow the left one, and rested on the lumbar portion of the diaphragm and the quadratus lumbaris muscle. Its ureter, which was rather smaller than that of the left kidney, passed down as usual to the place where the aorta divides into the two common iliacs. At this point, there was found a third renal gland, which rested on the right iliac artery, and on the psoas muscle. This third kidney was larger than the right one, and was of an oval shape, its two ends being somewhat widened or dilated. Its anterior surface was convex, the posterior one was flattened. The ureter of the right kidney, in passing along a longitudinal groove of this supernumerary one, joined, at about the middle of the gland, its ureter, and the common canal thus formed, and which was wider than either of the regular ureters, passed down to the bladder, and entered it at the usual place on the right side. The third or supernumerary kidney received three arteries; one of these was derived directly from the aorta, another from the right iliac, and the third from the hypogastric artery. One of its veins terminated in the ascending vena cava, and the two other in the right iliac vein. Its nerves were derived from the inferior mesenteric plexus, and they were interlaced with the right spermatic and renal plexuses. The structure of

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* This most appropriate designation of the distinguished German belongs exclusively now, we are told by M. Bouillaud with a Frenchman's accustomed vanity, to his countryman Magendie! In one of his recent lectures M. B. calls him "le physiologiste par excellence, et le seul qui merite le nom aujourd'hui." Have Tiedemann, Sir C. Bell, &c. shuffled off their mortal coil? —*Rev.*

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this kidney was altogether similar to that of the other two, in colour and in consistence. The relative size and weight of the three kidneys may be stated thus. The left kidney weighed upwards of eight ounces—the right one between three and four ounces—the supernumerary one upwards of five ounces. The left kidney was four inches and a half long, and nearly three inches wide—the right one measured three inches and a half in length, and nearly two inches in breadth—and the supernumerary one measured three inches and a half in length, and rather more than two and a half in breadth. The right and left kidneys were provided with supra-renal glands; the supernumerary one was not. The bladder and other parts of the uro-poietic system were quite normal. The man had never suffered from any urinary affection.—*Journal fur Chirurgie, &c. von Graefe und Walther.*

Discussion at the Royal Academy on Apoplexy and Phrenology—MM. Rochoux, Bouillaud, Broussais, Adelon, Amussat, Capuron, &c.

M. Rochoux is, it is well known by those who are acquainted with the French school of medicine, strongly opposed to many of the recently *devised* (shall we say *discovered?*) doctrines of the physiological school of medicine. He has written much and ably on cerebral diseases, and more particularly on apoplexy. A memoir which he lately read on this subject before the Academy, and in which he not only impugned some of the prevailing notions as to the causes of this disease, but also attacked the principles of phrenology, gave rise to a very animated discussion among many of the most distinguished members of that learned assembly. We propose to give a brief account of the proceedings, as reported in the Archives Générales.

M. Rochoux defines apoplexy to be "hæmorrhagie par rupture, suite d'une alteration du tissu de l'encephale." The hæmorrhage, he believes to be almost invariably preceded by a diseased state of some portion of the cerebral substance, and to be very rarely or never caused by the mere impulsion of the blood against the walls of the blood-vessels, whether the heart be hypertrophied or not, provided the substance of the brain be healthy. If, says he, the rupture of the vessels was determined by the action of the heart, we could not well explain how the cicatrization of the "foyers hæmorrhagiques" could ever take place; seeing that the cause, which primarily induced the mischief, was still in operation. The examination, too, of these "foyers" when recent, leads us to the same view of the question. In those frightful cases of apoplexy, in which the patient is stricken dead almost at once (the "apoplexie foudroyante" of the French authors), we find that the cerebral substance, which is in immediate contact with the effused blood, "est herissé de lambeaux rougebrun, flottant dans le foyer, comme une sorte de gazon," and that it is impregnated all round, to the depth of from half a line to two or three lines, with bloody dots; these dots or specks becoming less and less distinct from the centre outwardly. This dotted stratum is succeeded or enveloped by one which is of a yellowish hue. Both these strata of cerebral matter are always, according to M. R——, decidedly softened in texture. M. Rochoux accounts for the occasional absence of any cephalic annoyance before the apoplectic seizure, by the analogy of other important lesions of organs, which are detected only on post-mortem examination, no symptoms during life having indicated their existence. Apoplexy occurs quite as often when the circulation is calm and not excited, as when it is over-active and accelerated. During youth apoplexy is rare, and it becomes gradually more and more frequent in mature and in advanced age. Insane persons are frequently affected with cerebral congestion, but very rarely with genuine apoplexy.

M. Rochoux has compared the state of the heart in 30 apoplectic patients, with its state in 30 other patients, who

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had died of different diseases—the ages of the two sets of patients being nearly alike, from 60 to 70 years. In 24 of the first set of cases, the heart was found more or less hypertrophied; whereas, of the second set, it was similarly diseased in not fewer than 26. The influence of the heart, therefore, in predisposing to apoplexy is at least far from being very decidedly established.

M. Rochoux having thus impugned the etiological doctrines maintained by Broussais, Bouillaud, Hope, and others, regarding apoplexy, passed on to the consideration of the symptoms of the disease. He remarked that, whatever be the seat of the cerebral hæmorrhage, the whole, and not one part only, of the brain suffers, and that the general or constitutional symptoms are always the same in character.

Does not this well-ascertained fact invalidate, asks M. Rochoux, the truth of phrenology? Taken in connexion with the numerous inconsistencies which we constantly meet with in the doctrines of the advocates of this system, as well as the contradictions afforded by the examination of the heads of noted criminals—Fieschi, for example—we do not hesitate, says M. Rochoux, to assert that "la phrenologie est un des plus grands mecomptes de l'époque." This bold avowal appears to have fired the wrath of many of the academic members, and an animated discussion followed.

We shall first attend to the answers of M. Rochoux's opponents, in reference to the alleged influence of the heart in inducing apoplexy. M. Piorry, whose name is creditably known to the profession by his auscultatory researches, took the lead in reply. He endeavoured to shew that M. Rochoux had confined his attention too exclusively to the state of the left side of the heart in apoplexy, and that he had omitted to take any account of the retardation and stasis of the blood in the encephalon, induced by affections of the right auricle and ventricle. When both sides of the heart are simultaneously diseased, the injurious effects on the brain are greatly magnified; for while the blood is propelled into the cerebral arteries with unusual violence, in consequence of the hypertrophied left ventricle, its return through the veins is impeded by the gorged state of the right side of the heart. The statistical statement adduced by M. Rochoux loses, therefore, its force, by the defect of all information as to the state of the right side cavities in the 30 cases of fatal apoplexy. The arguments urged by M. Piorry in favour of the alleged influence of diseased heart, as a predisposing cause of apoplexy, are these: the attack is usually sudden, and not announced by premonitory symptoms—the patients are commonly fat, plethoric, and short-necked—and the most frequent occasional causes are strong bodily exertions or efforts.

That ramollissement of the cerebral substance should generally precede an apoplectic hæmorrhage is rather improbable, seeing that hæmorrhages often occur in other organs, unattended, as far as we know, with softening of their texture. That the parietes of the cerebral bloodvessels themselves are, in apoplexy, very commonly diseased—more friable or lacerable than in health, in consequence of calcareous depositions in their coats—is admitted by all pathologists; but certainly this state of the vessels is not always associated with ramollissement of the adjacent cerebral substance. The circumstance, too, of the sanguineous effusion being not unfrequently on the surface, and not within the substance of the brain, may be adduced in support of this view of the subject—that softening of any part of the brain is by no means a necessary accompaniment or precursor of apoplectic hæmorrhage. That this morbid state is occasionally present in cases of apoplexy, M. Piorry is quite ready to admit; but he is of opinion that, in by far the larger proportion of cases, the cerebral hæmorrhage is associated with some abnormal state of the heart and of the lungs.

M. Rochoux, in answer to these objections urged by M. Piorry, asserted that he had never met with a single case of a "foyer apoplectique," unaccompanied with ramollissement of the surrounding cerebral substance, and

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challenged his opponents to shew him such a case. M. Bouillaud, on the other hand, contended (such is the accuracy of medical observation, and such the value of medical testimony!—Proh pudor!!) that he had never seen an example of genuine ramollissement of any part of the brain associated with cerebral hæmorrhage. Of 54 cases of hypertrophy of the left ventricle, cerebral hæmorrhage existed in six, and ramollissement in five.

M. Rochoux answered that he had never denied altogether the influence of the state of the heart and arteries in producing apoplexy, and that he had merely asserted, that such influence is, on the whole, very inconsiderable, and not easily to be appreciated.

As to the ossification of the cerebral arteries, we should remember that this morbid state has never been detected in any vessels beyond the pia mater, and which are imbedded in the substance of the brain.

M. Louis stated that he belonged to neither party of disputants, and that, while he did not admit the theory of M. Rochoux that cerebral ramollissement always precedes apoplectic hæmorrhage, he was very far from assenting to the doctrine of his opponents, that the disease in question is very generally associated with hypertrophy of the heart. The two morbid states of the cerebrum, viz. ramollissement, and hæmorrhage on its surface, or within its substance, are by no means connected with each other in the relation of cause and effect. They differ in many respects: for example, they differ in regard to their seat or locality, to their progress, and to their termination. The former affection is observed chiefly in the cortical matter of the brain, in the septum lucidum, in the centrum ovale of Vieussens, and in the fissure of Silvius: the latter is most frequent in the corpora striata.

Ramollissement occurs usually in several points at the same time;—hæmorrhage is almost always single and isolated. Ramollissement is very often complicated with other morbid states—apoplexy is rarely so. Lastly, in respect to the termination of ramollissement and of apoplexy, these two affections differ most materially. The former is perhaps quite irremediable: while the latter is not unfrequently cured. It is only in regard to the mode of their commencement (debut) that these two diseases occasionally resemble each other; for if the attack of apoplexy is in one-third or fourth of the cases sudden, that of ramollissement is occasionally not less rapid, especially when the corpus striatum is the part affected.

Such are the opinions of M. Louis on the connexion of apoplexy with ramollissement of the cerebral substance. With respect to the influence of the heart in inducing the former disease, he quite agrees with the sentiments professed by M. Rochoux. Of 45 fatal cases of organic disease of the heart examined at La Charité, not one had exhibited any symptoms of apoplexy during life, nor any traces of cerebral hæmorrhage after death, and the researches of M. Louis at La Pitié have presented the same results. The cerebral congestions, which are most apt to supervene in cases of heart-disease, are serous and not sanguineous.

M. Rochoux replied to these observations of M. Louis, by stating that there are two sorts of ramollissement of the brain, very different the one from the other. The first is the consequence of an inflammatory action in the part affected, is invariably fatal, and may be recognized on dissection by the soft diffluent state of the cerebral matter, when a small stream of water is directed upon it; whereas, in the hæmorrhagic ramollissement, the cerebral substance is, as it were, reticulated, and is not so diffluent under a stream of water.

M. Bricheteau could not agree with M. Louis, that the action of the heart has little influence in producing apoplexy. He has published the histories of 35 cases of the disease, and in most of these there existed an hypertrophied state of the heart. As to the objection of M. Rochoux, that hypertrophy of the heart was very rarely present in the cases published by him, it is worthy of notice that all his patients were old men, who are seldom the subjects of hypertrophy of the heart. On the con-

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trary, M.M. Bricheteau's patients were under sixty years of age, and many of the cases recorded by M. Bouillaud occurred in middle aged persons. Perhaps therefore the difference in point of age of the patients may account in some measure for the difference in the results. M. Piorry detailed the case of a young boy, affected with hypertrophy of the heart, who had experienced repeated cerebral attacks, and had within the last few weeks been seized with hemiplegia. Here closed the discussion on the causes of apoplexy; and the other topic of debate—phrenology—was introduced by M. Bouillaud. He took a rapid view of the rise and diffusion of this new system of mental philosophy, and shewed very ably that its leading principles had been recognized by many of the wisest physiologists long prior to the time of Dr. Gall. M. B. did not hesitate to avow, that while he believed in the general axioms of the science, he was very far from yielding an assent to all its details, as expounded in any publication on the subject.* For example, he did not think that the feeling of sexual desire, or, as it is denominated, amativeness, has any connexion with the cerebellum,—the function of which is in his opinion to preside over and regulate the equilibrium of the muscular system in walking and in other movements of the body.

M. Rochoux was delighted to hear his honorable confrere make so liberal an avowal of his sentiments, and he was anxious thus publicly to call attention to the concessions now elicited; for the main scope of his attack on phrenology was directed against that mania for the localisation of mental faculties, which induced Dr. Gall in the first instance to portion out the brain into 27 different sections, and his followers to add nine additional sections to the number.

M. Broussais "prenait la parole." He was not prepared to defend all the opinions either of Dr. Gall, or Spurzheim, or of any other phrenologist. Many of the details of authors on this, and indeed on every other branch of science, are necessarily imperfect and inaccurate; but such an objection cannot invalidate its leading principles and conclusions. These have been deduced from a patient examination of facts, which no more reasoning can gainsay, and which most satisfactorily establish this important truth, that certain mental developments are always associated with certain cerebral formations. This "empiric" fact is the foundation of all phrenological reasonings, and notwithstanding the indiscreet and ignorant haste of many disciples of the science, its essential doctrines are based upon the most incontestable observations.

M. Rochoux has rather contemptuously asked us to shew him those various organs of the brain, which exercise different functions, and which are alleged by us to preside over different powers of the mind. No discreet phrenologist has ever professed to point out the different portions of the brain, as

* In his recent work on medical philosophy, M. B. has expressed sentiments to the same effect. His words are—"Sans doute, il reste infiniment à faire pour la determination precise du siege des facultés intellectuelles et morales, et de leurs instruments; sans doute, cette science naissante est enveloppée encore d'obscurités, de doutes, d'incertitudes. Mais la base meme de la doctrine repose sur une si nombreuse collection de faits et d'observations, qu'elle est inebranlable." He then alludes to the incredulity of M. Magendie, who ranks phrenology with necromancy, alchemy and astrology, and has stated his opinion in this sentence:—"Les efforts de cette pseudo-science reduisent à des assertions, qui ne soutiennent pas un instant l'examen." M. Bouillaud in reply says—"En vain Cuvier et Napoleon lui-meme s'opposerent à la doctrine de Gall. Elle triompha de leur resistance, et par une vengeance digne d'elle, elle se sert des tetes de ces deux grands hommes pour appuyer ses principes. Apres une telle victoire, quels ennemis la phrenologie bien comprise aurait elle desormais à redouter?"

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if they were separated and distinct organs. Like the faculties of the mind itself, they are intimately and indissolubly connected together, and it is impossible to ascertain the exact boundaries of each division or cerebral organ. Of late years, little has been said by the opponents of phrenology of that argument, drawn from the want of perfect correspondence between the inner and outer surfaces of the cranium; an argument which was so boastfully dwelt upon twelve or twenty years ago. The phrenologist does not require the measurement to a line, either in point of extent or of prominence, of organs, before he can estimate the prevailing character of any individual. The abandonment of this weak objection shews that a very great change has taken place in the sentiments of those who are still hostile to phrenology. It has been said by some that comparative anatomy is opposed to our science; for example, that the brain of many of the lower animals very much resembles that of a human being, and yet their mental endowments are few and feeble. This argument when examined lends but little support to the opponents of phrenology. It is very doubtful that man possesses a much greater number of mental feelings and faculties than many of the lower animals. In them they exist probably "en germe, en esquisse." No one will deny that they are endowed with the feelings of love for their offspring, and of attachment to their abodes; and we think that it is equally true that they possess a memory for persons, things and places, as well as a perception for sounds and distances. Who will deny that pride, or some feeling close akin to it, is felt by the cock surrounded by his feathered dames, by the pigeon strutting about with puffed-out neck, and the pea-fowl displaying his gorgeous train. Is there not something almost human in these exhibitions of self-esteem and love of admiration?—Glimmerings of ideality, (?) of judgment, of comparison, of veneration, of hope, &c. are often observed in some animals, and most conspicuously in those which approach nearest in organization to the human development. Does not the lively joy of the dog, when unkennelled for the chase, betoken something of the workings of an imagination, which recals to him "des plaisirs qu'il a deja goutés"? and are we wrong in saying that this most faithful animal has a feeling of veneration (we do not say, theosophy) for his master?

We have heard lately a great deal of certain direct proofs—as they have been called—drawn from the measurement of the heads of notorious criminals, against the truth of phrenology.

The language which has been used by our opponents must satisfy every candid enquirer that they have not at all understood the doctrines, which they were assailing. It is rare that a murder is committed from mere "amour du meurtré," or from the direct impulse of the feeling of destructiveness. Other baneful passions too frequently urge on to the commission of this most dreadful of sins. Jealousy, revenge, avarice—these are often the prompters of the murderous deed. Again it has been urged against phrenology that very few scientific men, distinguished for their attainments in mental or in physical philosophy, have announced their assent to the truth of its doctrines. This indeed is a most feeble objection. In all ages, the "savans" have been the most opposed to the diffusion of "deconvertes nouvelles." The dread of ridicule, envy, the reluctance to be taught any subject by younger and less lettered men, and a host of other feelings—"voila tres souvent les mobiles de cette opposition."

M. Broussais is ready to admit that phrenology is far from being yet complete as a phrenological or descriptive system of all the cerebral functions, and that the localisation of certain faculties is still imperfect. What remains to be done may be easily accomplished by the careful and repeated examination of the heads of those, who are conspicuously distinguished for any particular mental endowment. There may be difference of opinion as to the exact limitation of certain organs; but such a discrepancy on smaller matters affords no solid objection to the fundamental positions of the science.

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That education and the exercise of particular faculties will, at least in youth, induce a larger development of the corresponding cerebral organs, than if no such education or exercise had been undergone, M. Broussais has repeatedly assured himself by minute observation; but we are to remember that it is only "quand il n'y a pas de predominance speciale, que le cerveau va comme il est *dressé*."

The next speaker was M. Adelon, one of the most scientific members of the academy. He observed that M. Rochoux was not quite correct in stating that in apoplexy, whatever may be its seat, the "ensemble" of the brain suffers, and that the general symptoms are the same in all cases. Cerebellar apoplexy has been very frequently diagnosticated by the presence of involuntary erections of the penis.*

With respect to the labours of the phrenologists, M. Adelon very justly remarked that surely they are quite as deserving of scientific examination as the attempts of anatomists to measure the facial angle and the area of the cranium in animals—attempts which have engaged the attention of such men as Camper, Daubenton, Cuvier, and Soemmering. All these enquiries rest on the same foundation, and have the same object in view—to discover, by the formation of the (anterior part) head, the amount of intelligence possessed. Moreover every series of experiments on the brain and nerves performed, within the last fifty years, has tended "a pluraliser le systeme nerveux." The divisions of Bichat, the researches of Charles Bell, Magendie, Flourens, Foville, &c. all tend to this result, and the conclusions, which these eminent physiologists have come to, have met with very general assent. If phrenology has more lofty pretensions, aiming, as it does, to penetrate into the depths of mental philosophy, it encounters, we must acknowledge, difficulties numerous, great, and perhaps insurmountable. But be it remembered that it professes to have been built, and still to advance on the results of cautious, minute and repeated observation; and if so, although the subject may be still encompassed with difficulties, it does not become the man of science to reject or despise its labours. The "point culminant" in phrenology is, first to determine the number of faculties, and then to ascertain the precise localisations of these faculties or endowments. *Perhaps we shall never arrive at exact and indisputable truth on such questions;* and "c'est là la veritable et la seule objection rigoureuse qu'on ait faite." In conclusion, M. Adelon expressed his opinion that it was rash and unphilosophical in any one to profess his contempt of phrenology, until he has minutely and most attentively studied the subject. Few medical men have leisure enough to devote to such difficult enquiries as those involved in phrenology.

M. Amussat professed himself favourable on the whole to the conclusions of phrenology. He denied the assertion of M. Rochoux, that the history of apoplectic symptoms affords any just objection. Many cases of the disease seem to confirm the doctrines of M. Gall. With respect to the alleged inconsistency of the cranial developments in Fieschi and other notorious assassins with their well-known characters, M. Amussat was of opinion that many incorrect statements had been made by the friends, as well as by the foes, of phrenology. It has been asserted that the head of Fieschi is

* M. Recamier, well known as a most experienced and able physician, stated, as the result of his experience, that, when the cerebral hæmorrhage was on the anterior lobes, the organs of speech were very generally paralysed.—M. Bouillaud confirmed the truth of this remark, and observed that the loss of speech was in some cases of apoplexy unaccompanied with any other mental infirmity. It is necessary not to confound the mere paralysis of the tongue with the loss of the faculty of speech. The movements of the tongue may be quite free, and yet the patient cannot articulate a word. The cause of this special aphonia is unquestionably some lesion of the anterior cerebral lobes.

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not to be distinguished from that of an "honnete homme." Now in truth it is (shewing the mould) the head of a miserable wretch.* It is of small dimensions. The organs of pride and firmness—the most prominent and "motivant" features in Fieschi's character—however are of considerable size. The lateral depressions in a murderer's head may at first sight surprise us; but, be it remembered, that Gall has never said that a person may not be an assassin "sans l'organe du meurtre." The conformation of the head of Fieschi accounts for, if not his last and most atrocious crime, the profligate dispositions of his general character. His destructive propensities were by no means so conspicuous as his inordinate and unprincipled love of notoriety. It did not appear that he had been urged on to his villainous acts by revenge or bloodthirstiness. He had no cause of resentment against the king or any of his attendants; but leading for a length of time an idle, unoccupied and unprincipled life, his heart had been open to some vague, and almost undefinable Satanic whisperings of personal distinction.*

MM. Maingault and Capuron—the former a most meritorious surgeon, the latter a distinguished physician-accoucheur—spoke in favour of phrenology. One remark which M. Capuron made deserves to be noticed. "I cannot," said he, "believe that the same organ is the seat of the reasoning principle which controls the passions, and of these very passions which so often overthrow the reason."—*Arch. Gener.*

M. Ferrus, in the introductory lecture to his course of clinical instruction† on mental diseases, at the great lunatic establishment of the Bicetre, thus expresses his opinion of the value of phrenology:—

"The method of studying and treating insanity recommended by MM. Gall

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* The tone in which many of the French journalists have spoken of this and other atrocious assassins is, we fear, sadly expressive of the false and most dangerous sentimentality, which has so often misled the minds of their countrymen. For example, in a late number of the Gazette Medicale de Paris, we meet with the following fanfaronade: "Fieschi se pose avec ostentation sur le terrible piedestal qu'il s'est elevé, et semble dire aux hommes epouvantés qui le regardent: 'qui d'entre vous en eût fait autant?' Que sa tete tombe, c'est bien; mais qu'on lui rende cette justice qu'il a bravement conduit, et executé son enterprise."

Another medical periodical, Lançette Française, after describing the characters of Lacenaire and Avril, (who, it will be remembered, were condemned to death about a twelvemonth ago in Paris,) and shewing that they, at least Lacenaire, had frequently committed murder from the basest and most villainous motives, favours us with the following precious morsel of jurisprudential reasoning. "Nous le demandons, á quoi sert la guillotine pour des hommes de la trempe de Lacenaire? A quoi sert il pour les hommes bruts et courageux comme Avril? A rien, absolument à rien; car, comme le dit Lacenaire, tout assassin est courageux. Reste alors le hideux du supplice dans toute sa nudité."

* We fear that there are many Fieschis and Alibeaus in the inhabitants of the French metropolis at the present moment. We cannot well appreciate—fortunately from want of examples—such characters in this more phlegmatic, calculating, and selfish country of ours. There are villains enough, alas! among our population, and crimes of almost every dye; but certainly there are few instances of "political assassination."—*Rev.*

† The example of M. Ferrus deserves to be imitated in this country. Insanity, like every other disease, can be advantageously studied only at the bedside of the sick. Hitherto all our public lunatic establishments are no better than so many "musea clausa." Now that medical jurisprudence is more attended to, we may hope that the study of mental disorders will occupy a prominent place in medical instruction.

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and Spurzheim appears to us to be by far more philosophical than any other, and, if pursued with discretion, likely to lead to most beneficial consequences;" and a higher authority, M. Andral, in his Lectures on the Nervous System, has used these words:—

"La doctrine phrenologique contient de grandes choses, de belles acquisitions pour la science; mais malheureusement aussi elle renferme des niaiseries, qu'on nous passe expression. Ils ont donc tort ceux-la qui traitent Gall sans reserve, et affectent pour lui un superbe mépris; de meme qu'ils tombent dans un autre défaut, ceux qui adoptent ses opinions d'une manière trop exclusive."

ILLUSTRATIONS OF VARIOUS LESIONS &c. OF THE NERVOUS SYSTEM.

We have associated in this article a number of detached notices, which, when standing detached and insulated, could only have excited our passing curiosity, but when linked together, may probably suggest some useful hints in the study of the Neuroses. The first case recorded exhibits a very striking example of one of the rare forms of that Proteian disease, hysteria—the stoppage of the urinary discharge from the bladder, and the vicarious secretion from the surface of the body, will attract particular notice.

The case of catalepsy, although one of short duration, was very characteristically defined: the pathognomonic sign of the disease—the limbs and body retaining whatever position may be given to them—was well marked. Baron Larrey's case of traumatic epilepsy, of 33 years' standing, and connected apparently with irritation from local disease seeing that the convulsions ceased on the removal of a diseased portion of cranium, is highly interesting and instructive. With respect to the treatment of idiopathic epilepsy by the nitrate of silver, or by other metallic salts, we may remark that it will succeed in some cases; but the experienced practitioner is well aware that this malady is too often the mere outward symptom of cerebral disease, to warrant great reliance on any particular medicine. Setons or issues in the neck should be generally employed at the same time, along with the use of metallic or of other tonics.

The cases of neuralgia, and more especially the first one, will be read with great interest. The severity and extreme obstinacy of the symptoms, the irregularity of the attacks, the almost total inefficacy of every kind of treatment, and eventually the happy recovery in a manner quite unexpected—such are often the features of this imperfectly understood disease. On the whole, internal remedies are not of much use; or at least they fail so often, that we can never place much reliance on them. Provided the constitutional health be good, more benefit will be derived from local than from general treatment. The veratrine and aconitine ointments will sometimes succeed when all ordinary means fail; but, as a matter of course, many cases will resist them. We observe reported by Mr. Skey in a late number of our cotemporary, the Medical Gazette, two or three well-marked cases of severe neuralgia, in which decided benefit was derived from the aconitine ointment.

Strychnine, also, one of the most powerful alkaloids, may sometimes succeed; it may be used internally and endermically at the same time. We have adduced a few cases to illustrate its great utility in some nervous affections of the bladder, and especially in incontinence of urine, when depending on an over-excitable, or on an enfeebled state of the sphincter vesicæ.

We have appended a few observations on the medical uses of electricity and galvanism; and, lastly, we have extracted from one of the German periodicals a short account of the appearances found in the bodies of some animals, which had been killed by lightning.

Hysteria followed by Ischuria—Vicarious Discharge of Urine from the Mammæ.

A young woman, 24 years of age, of a highly irritable temperament, and

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who had frequently suffered from violent convulsive attacks, was seized with a complete suppression of urine. For some days previously, she had felt a sense of painful contraction in the loins, over the kidneys, and along the lines of the ureters, extending occasionally down to the seat of the bladder. The abdomen was tympanitic and very tender, the bowels obstinately confined, the stomach irritable, and the intellect was wavering. There was a frequent desire to void urine; but the catheter brought away only a very small quantity of limpid inodorous water. The vomitings and other symptoms gradually increased in severity, and the suppression of the urine had continued for fifteen days, when the patient began to complain of acute pain in the axillæ and in both mammæ, which soon became swollen and tender. A limpid fluid, having a very distinctly urinous smell, oozed out from both nipples, with great relief to all the symptoms. This oozing continued for two days, after which it ceased; and, strange to say, it then took place from the umbilicus, and from the skin of both legs. The surface, from which this oozing took place, was bedewed with drops of a clear fluid, while all the rest of the skin was quite dry, and free from any moisture.

The discharge from the skin of the legs soon ceased, but the mammæ and umbilicus were still alternately affected with this extraordinary secretion—the former more frequently than the latter. After continuing for some time, the discharge ceased during several days (still no urine had been voided from the bladder), the abdomen began again to swell, and all the former spasmodic symptoms threatened to return, when all of a sudden, after a fit of the most agonizing sufferings, a fulness over the region of the bladder appeared, and there flowed from the urethra upwards of seven pints of deep, strong-smelling urine. Twelve hours afterwards, she again passed upwards of four pints. From this date she remained free from any urinary irregularity; but six weeks afterwards, more than eight ounces of blood flowed from the mammæ. The catamenia had been irregular for a length of time. This sanguineous discharge returned at intervals; and sometimes it took place from the navel. The health of the patient continued to be much disordered for more than a twelvemonth, and when the above account was written, it appears that she was still suffering from dysmenorrhœa, attacks of spasm, and symptoms of vermination. On one occasion, she had voided a piece of a tænia cucurbitina. —*Caspar's Wochenschrift, April*, 1836.

Case of Catalepsy—well-marked Symptoms—speedy Recovery.

A middle-aged woman, of an active constitution, and who had long enjoyed good health, was brought into the Hôpital de la Pitié on the 15th of July, under the following circumstances. It appears that she had been engaged on the preceding day as a labourer in the hayfields, and that, feeling a troublesome headache, she had sat down on the ground, and had there fallen fast asleep. She had continued in this state during the whole of the night, and was found next morning by a countryman. She was immediately conveyed to the hospital, and M. Barth drew up an accurate report of the case. She was still in a deep sleep, utterly insensible to all ordinary impressions, and even to pinching and pricking of the skin. The breathing and pulse were natural. All the joints of the limbs were pliant, and easily flexible; and it was found that the legs and the arms remained steadfastly in the position in which they were placed. This singular character of the disease was most conspicuous, when the body was raised up on the bed, and the arms and legs were lifted up in the air at the same time. There she sat for some time, resting only on the ischia, in the strangest and most difficult position, her arms being stretched out, and her heels nearly as high as her head: by degrees the body sunk back, by gentle oscillations, on the bed.

Two sinapisms were applied on the inside of the legs. She soon began to be annoyed with their irritation, and to complain of the pain. The somnolence gradually abated, and towards

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evening she awoke, quite unconscious of what had passed, and surprised to find herself in a hospital. Next day she was quite well.—*Journ. Hebdom.*

Epilepsy of 33 Years' Standing, cured by the Removal of a Carious Portion of the Cranium.

One of the inmates of the Hôpital des Invalides, 63 years of age, had been wounded at the battle of Marengo with a piece of a small shell (obus) in the forehead. He was immediately trepanned, and a portion of the bone extracted. The symptoms of commotion and of compression were succeeded by those of encephalitis. When these subsided, he was found to be paralytic on the right side, and to have lost completely "la memoire des choses." The wound never fairly healed, but remained fistulous; and scarcely a day passed over without an attack of epileptic convulsions. For the last 33 years, he had been in this deplorable condition, subjected to daily fits, totally deprived of his memory of things, and having a fistulous sore on his forehead. M. Larrey having detected with a probe a loose portion of bone, divided the integuments, and extracted it with a forceps. The wound and sore speedily healed up, the attacks of epilepsy have ceased to return, and his locomotive and mental faculties have become considerably improved. We are informed, however, that his memory of numbers and of names is still very imperfect and wavering.

The reporter of the preceding case alludes to the confirmation which its history gives to phrenological science, and invites the disciples of Gall to study "la precieuse collection vivante" of heads, in the "asyle de l'ancienne valeur de nos armées."—*Lançette Française.*

Epilepsy cured with the Nitrate of Silver.

Two successful cases are reported in the March and April Numbers of the Italian Journal, Il filiatre Sebezio. In the first, which occurred in a plethoric man, 29 years of age, the disease had lasted for twelve years, and had gradually become more frequent and severe, so that the patient could not follow his occupation as a coach-driver. The medicine was taken in minute doses, 1-16th of a grain, at first; and by degrees the dose was increased to a full grain in 24 hours. The treatment was begun in June, and by October, the patient seemed to be quite well.

The subject of the second case was a youth, 20 years of age. In 1829 he was first seized with an epileptic fit, after the sudden stopping of an epistaxis. In 1831, Dr. Semenze visited him. As he was plethoric, and exhibited symptoms of congestion in the head, antiphlogistic remedies were used for two weeks, and then the use of the nitrate was commenced. It was given for ten days in the dose of a quarter of a grain; this was gradually raised to a grain and a half in the course of 24 hours; and this high dose was continued daily for a month. General bleeding, and the application of leeches to the anus had been used during the exhibition of the medicine. The cure was complete; and it seems to have been permanent, for there has been no return of the disease during the last three years.

Case of protracted Neuralgia of the Spermatic Nerves, connected with a small Urinary Calculus, whose presence had not been suspected.

A gentleman, 52 years of age, healthy and very robust, was suddenly seized with an excruciating pain in the left testicle. It extended up along the cord, and was accompanied with general spasm, repeated vomitings, and extreme anguish. This attack lasted for 15 hours, and then subsided gradually. On the following day he was easy, but on the next a similar attack was experienced. For some time the disease continued to return in this periodic manner, every third day. Quinine was, therefore, administered in large doses, and with a certain degree of benefit; for, at least, the intervals between the paroxysms were now longer, although

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their severity was almost as great as ever. Sometimes five, eight, or even fifteen days elapsed between the attacks, at the period when this gentleman went to Paris to consult M. Reveillé-Parise. The testicle and cord were most attentively examined; but no appearance or sign of any lesion could be discovered, and the general health of the patient was excellent. In spite of "bains, antispasmodiques et lavemens opiacés," the disease continued to return with the same intensity of suffering, and the attacks were as irregular as before. A rigid antiphlogistic regimen was tried, and this appeared to have for some time worked a decided benefit; but again the enemy re-appeared, and M. Marjolin was then consulted. This experienced surgeon could not detect any trace of morbid change in the affected part, and he agreed with M. Parise in regarding the case as one of neuralgia of the spermatic nerves, although in a thirty years' practice, he had never before met with a case of the sort.

The cord was repeatedly leeched; the loins were cupped; vapour-baths were tried; various antispasmodics and anodynes, internal as well as external, were exhibited—but all in vain. Once more the quinine was resorted to; but this medicine, as well as the subcarbonate of iron in large doses, the extract of aconite, the application of morphia, of cyanuret of potassium, &c. brought little or no relief to the patient's suffering. If one or two paroxysms were at any time relieved, the subsequent ones were more excruciating than ever. When the attack of pain had subsided, the patient felt as well as ever he did in his life, and all the functions of the body were vigorous and healthy. The urine was repeatedly examined, and it was found to be uniformly clear, and free from any sediment.

He left Paris, in despair of obtaining any relief to his malady. A short time after this period, he was very unexpectedly seized with a retention of urine. This was relieved by the catheter. A second seizure occurred a fortnight afterwards, and to the surprize both of patient and surgeon, he voided a small calculus, "dont la sortie determina aussitot et completement la cessation des douleurs."*

The preceding case is a most interesting and instructive one. If we suppose that the neuralgia was connected, from the beginning of the illness, with the presence of the calculus in the kidney or bladder, it is not easy to account for the intermittent character of the attack.—*Bulletin de Thérapeutique.*

Neuralgia.

An obstinate case of neuralgia of the portio dura and frontal nerves, having resisted a host of remedies, external as well as internal, yielded at length to the application of a plaster, (composed of resinous plaster, of Venice turpentine, and of tartrate of antimony,) to the affected side of the face. It was kept on for several days. When it was removed, the skin was found to be covered with pustules and ulcers, but the neuralgic agony had quite ceased. The disease had not returned after the lapse of nine months.—*Medicinische Zeitung.*

We have known a plaster, composed of ceratum saponis, extract. belladonnæ, and acetas plumbi, act in the same

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* Every surgeon knows that calculi will sometimes lodge in the bladder for a length of time, without occasioning much inconvenience. In a late Number of the Journal Hebdomadaire, Dr. Segalas reports a case, in which he found on dissection, in the bladder of an old gentleman, upwards of 300 calculi, all of which were composed of uric acid. The patient had not during life experienced any inconvenience, which could lead to the suspicion of such an extraordinary accumulation. Ten days before his death, he was seized with a retention of urine, which required the daily use of the catheter.

The bladder was found to be much hypertrophied; its mucous coat was reddened and inflamed. The kidneys were enlarged to twice their ordinary volume; the left one was softened in texture, and infiltrated with a purulent sanies.

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manner and with like success as the one now mentioned.*—*Rev.*

Curious Case of Metastasis of Neuralgia.

An old man had suffered martyrdom from neuralgia of the left portio dura for 26 years. His agonies were sometimes quite dreadful; the slightest touch of the affected surface causing a violent spasm of the muscles of the face. The pain he compared to darts of lightning passing across from the ear to the nose. The general health had remained good during the whole time. Every remedial means had been ineffectually tried, and the only relief, which the patient could obtain, was from immense doses of laudanum taken every day. In 1831 he was suddenly seized with intestinal inflammation, which was attended with extreme sensitiveness of the abdomen, so that the gentlest touch brought on convulsions of the abdominal muscles: the neuralgia of the face quite ceased, and the cheek could be freely pressed and moved without any inconvenience. When the abdominal attack subsided, the neuralgic affection of the face returned, but certainly not with the same severity as before. Four days afterwards it again ceased, and the patient suffered from a burning pain in a circumscribed spot on the left hypogastric region. [The report stops here.]—*Hufeland's Jour. der Heilkunde.*

* One of the German journals gives a formula for the preparation of the balsamic plaster of Schauffans, (who received 30,000 dollars from the Russian Court, for disclosing the secret of its composition,) which had once an extensive repute for the cure of rheumatism, palsy, hemicrania, deafness, loss of vision, &c. The formula is the following:—

℞. Olei olivar, ℥iij.
Saponis Veneti, ℥j.
Pulv. cerussæ Venetæ, ℥j.
—— sulphur. hydr. rub. ℥j.
—— camphoræ, ʒiij.
—— castorei, ʒiss. Misce.

If the plaster thus prepared is not firm enough, a portion of wax should be added.

Utility of Nux Vomica in Treatment of Incontinence of Urine, and Weakness of the Generative Organs.

Incontinence of urine, whether it occurs in young children, or in old persons, is very generally dependent upon a relaxation of the sphincter vesicæ. The children, who are most liable to this annoying complaint, are of a weak lymphatic temperament, and usually exhibit the signs of a scrofulous and rachitic tendency. Laughing, coughing, &c. are often sufficient to cause the urine to escape. It is well known how apt these children are to urine in bed. Various remedies have been recommended by different practitioners. M. Dupuytren had great confidence in the daily use of the cold plunge bath. (This too was his favorite remedy against chorea.) MM. Baudelocque and Guersent also, two good authorities on the diseases of children, approve of cold bathing. The late Dr. Underwood recommended sea-bathing; and M. Lallemand of Montpelier informs us that no case of incontinence of urine in young persons has ever resisted the continued use of aromatic baths. These baths are prepared by infusing several handfuls of some of the labiate order of plants, called the "aromatic species," in boiling water, until it becomes of an agreeable coolness. Just before the child is put into the bath, a wine-glassful of brandy is to be mixed with it.

M. Baudelocque has lately tried at the Hôpital des Enfans the occasional introduction of a catheter into the bladder with good effect. Blisters and electricity also have been found of utility. The internal remedies, which have been most highly praised, are cantharides and nux vomica. Cantharides may be administered in the form of tincture—from five to twenty drops for a dose—or of the powder in pills. The formula used by M. Seiger is the following:—℞. Pulv. canthorid. gr. vj. Extract. boraginis, ʒij. Misce et divide in pil. xxiv.—one of these to be taken every night. More lately the extract of nux vomica has been strongly recommended by a number of physicians in France. A case was published by M. Mondiere in the

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Archives Générales, which attests the great efficacy of this drug. A young female, 20 years of age, had been affected with nocturnal incontinence of urine, since she was six years old. The following prescription was written for her. ℞. Extract. nucis vomicæ, gr. viij. Oxydi ferri nigri, ʒj. M. et in pil. xxiv. divide. One pill was ordered to be taken three times daily. The incontinence had ceased before she had taken all the pills. The use of them however was continued for two or three weeks longer, to prevent any relapse of the complaint.

M. Lafaye has reported in the Journal de Med. de Bordeaux the case of an old man, who had been long distressed with incontinence of urine, and in whom a cure was effected in the course of seven weeks by the use of the extract, given in doses of from four to eight grains daily.

MM. Trousseau and Pidoux treated successfully in the Hôtel Dieu a case of paralysis of the bladder and of the rectum, which had been caused by an injury of the spine. These two physicians, in a well-written memoir on the medicinal virtues of the nux vomica published in the Journal des Connoissances Medico-Chirurgicales for May last, allude to its effects on the organs of generation, and report the case of a man who had been affected for a length of time with complete paraplegia, accompanied with general trembling: the thoracic and abdominal limbs, the bladder and the rectum, had quite lost their contractility, although the sensibility of these parts remained. From the commencement of the illness, the excitability of the generative organs had been destroyed. Under the continued use of the nux vomica, the paralysed parts recovered their motility, the tremors ceased, and the patient began to have erections of the penis.—These authors mention the particulars of another case somewhat similar, but not so severe, in a middle-aged man; and in him too the effects of the nux vomica on the penis were indubitable: "nous sommes parvenus à lui donner une virilité." The pharmaceutical preparation, which MM. Trousseau and Pidoux prefer, is the fresh alcoholic extract. The dose varies from one to fifteen grains per diem. The alcaloid —strychnine—is much more powerful. It is associated in the nut with another alcaloid, which has been called Brucine, and with an acid to which MM. Magendie and Pelletier gave the name of Igasuric. The same principles exist, but in different proportions, in the St. Ignatius bean.

Medical Uses of Electricity.

There is an immense medico-electrical institution in Paris under the direction of M. Le Molt. From a report of the practice pursued there during the course of last year, we find that this most potent agent is still extensively used in the treatment of many diseases. Of late years electricity has been too much neglected by English practitioners. Like most other remedies, when first introduced, it was eulogised too highly; and hence, partly from its often failing to produce the expected effects, and partly from its application being not always of easy attainment, it has for some time fallen into unmerited disuse. There are four different forms in which electricity may be administered —frictions with an electrical brush; a mild and often very serviceable form in recent cases—the subtraction and insufflation, by means of, either aigrettes (bunches of feathers) of various sizes, or, what is still better, of the electrical brush—sparks, either communicated to or withdrawn from the part—and lastly, shocks or currents transmitted from one part of the body to another. It is well known that the last form is the most powerful of all. Galvanic electricity also was occasionally used with great success in some of the cases. The diseases, in which electricity has proved most useful at M. Le Molt's establishment, are various kinds of paralytic weakness, whether this proceeds from cerebral or spinal lesions, or from the poison of lead; chronic rheumatism and neuralgia; hysteria and hypochondriasis; atony of the urinary bladder;

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sterility, leucorrhœa, amenorrhœa, and weakness of the generative organs; deafness; and defects of vision.

All the cases of palsy, induced by the action of lead, were successfully treated. The mere electrical frictions, without having recourse to sparks or to shocks, were generally sufficient. In the palsies connected with cerebral or spinal lesion, the cases were fewer in number, and much more difficult of attainment. Great caution was necessary in administering the remedy in its powerful form over the head and upper portion of the spine. It is always proper to commence with the frictions and sparks, before having recourse to the giving of shocks.

Perhaps no set of cases are on the whole, more decidedly benefited by electricity than chronic rheumatism, complicated, as it often is, with "symptômes paralysiformes."

There are certain internal remedies, the use of which may, in most cases, be advantageously associated with electricity. Of these, strychnine is the most potent; and it is a curious circumstance, that this drug has the effect of inducing in palsied parts sensations, not unlike to those occasioned by electricity. When strychnine is applied to the excoriated surface of the eyelids or temples, the patient often perceives sparks issuing, as it were, from the eye itself. This is always a favourable symptom in treating amaurosis with strychnine. Frictions with a concentrated tincture of strychnine on paralytic parts have been occasionally used with benefit. Veratria is another of these remedies. Its power of causing a most troublesome tingling and pricking over the whole surface is certainly very strange, and appears to indicate that this alcaloid exerts a marked effect on the extremities of the nerves. We have not room at present for inserting more than one of the cases. It was an example of paralysis of the tongue, cured, or at least relieved, by galvanic electrity.

The patient, a man 45 years of age, had lost the power of speech, in consequence of an apoplectic attack, for 18 years, when he applied to Dr. Palaprat. An acupuncture-needle was inserted into the nape of the neck, in the direction of the basis of the brain. A communication was then established between the needle and the negative pole of a powerful Voltaic pile; and on the tongue was placed a small plate of platina, enveloped in linen which had been moistened in a saline solution, and this plate was put in communication with the positive pole of the pile. The patient experienced "commotions graduées," which gradually became so strong, as to make him be sensible of bright sparks before his eyes, an insufferable metallic taste, and violent contractions in the tongue and stomach. The dumb man, uttering an unusual cry, started forwards, articulating these words: "Je parle, monsieur—je parle, merci." After submitting to five other séances, he was able to pronounce every letter, and to repeat the words which were spoken to him. By continuing a proper discipline of utterance for several months, this patient was able "repeter plusieurs phrases d'une manière très intelligible, mais qui tendait toujours à devenir confusé."—*Journal des Connoissances Medicales.*

Post-mortem Appearances in Cattle killed by Lightning.

A peasant, with a herd of 27 cattle, had taken shelter under a tree during a thunderstorm. He fortunately escaped, but every one of his beasts was killed by the lightning. On examining them, numerous dark zig-zag lines or streaks, produced by the scorching of the hair, were observed on their left sides, extending from the neck and shoulders towards the flanks and udders. These streaks varied in breadth, from a quarter of an inch to two and three inches.

A high degree of putrefaction had already (21 hours after the accident) taken place in all the bodies: this had been favoured by the hot weather. The stomach and intestines were enormously distended with gas, and a dark bloody-looking, offensive fluid oozed from the nostrils, muzzle, anus, &c. The mucous membranes, at these different

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openings, had a blue or blackish hue. The cellular membrane under the skin, in the course of the streaks, was found to be ecchymosed, and the veins in every part of the body were gorged with a very black and thin blood. All the viscera were more or less congested. The spleen was quite flaccid, and of a pappy consistence. The blood in it and in the venæ cavæ had quite the appearance of tar.

In one beast, the right half of the tongue was denuded of its epithelium, the velum palati was divided, the epiglottis destroyed, and the trachea cleft along its whole length, as if it had been divided with a knife: the trachea and likewise the bronchi were filled with clots of black blood. No lesions, such as now described, were found in any other of the cattle. In all, the right cavities of the heart were gorged with tarry-looking blood. The brain and other parts of the nervous system did not exhibit any abnormal appearance. —*Medicinische Zeitung, No.* 10.

Poisoning from Colchicum.

Mad. de B. 25 years of age, swallowed a large wine-glassful of the tincture of the bulbs of colchicum, with the view of destroying herself. She was immediately seized with most severe pain in the epigastrium. Two pints of milk in about half an hour after the act had been committed, and subsequently two grains of emetic tartar were given. Copious vomiting of a brownish-coloured fluid ensued. M. Caffe did not see the patient till nearly six hours after the accident. He found her cold and very pale, complaining of tenderness in the epigastric region, a sense of constriction around the chest, and of great dyspnœa. There was no stiffness, nor any convulsive movements of the limbs;* the lips were of a purple hue, the pupils were not dilated, nor was the vision affected; the tongue was pale and cold to the touch; there was an almost constant vomiting, but no purging; the pulse was very slow and thread-like, and the patient, who was quite sensible, was tortured with a burning thirst, and every now and then she uttered the most distressing moans. M. Caffe administered iced aërated lemonade, and ordered sinapisms to be applied to the feet, and embrocations to the limbs and abdomen.

On the following morning, there was complete prostration of all the vital powers; the retching still continued, and the cramps in the feet, although not so severe, were still present. Sinapisms were applied to the thighs, and a few leeches to the epigastrium. The patient became gradually weaker, and death took place in the afternoon, 22 hours after the poison had been swallowed.

The body was examined 70 hours after death. Putrefaction had already commenced. Most of the parenchymatous viscera were congested with dark-coloured and fluid blood. The stomach and intestines were removed and set apart, for the purpose of analysing their contents. On the following day they were examined; but unfortunately putrefaction had already advanced so far, as to have altered considerably the appearance of every part. The mucous membrane of the intestinal canal, in different places, was of a wine-red colour; but no dependence could be placed on the results of such an examination. Equally unsatisfactory was the chemical analysis of the contents of the bowels.

Strange to record, the sister of this patient, a girl of about twenty years of age, made a similar attempt on her life, some months afterwards, by drinking between four and five ounces of a weak vinous tincture of colchicum. The symptoms were nearly the same as in the preceding case; violent pains in the epigastrium, constant vomiting, without however any diarrhœa, a sense of constriction around the chest, extreme dyspnœa, gradually-increasing coldness of the whole surface of the body, and absence of convulsions, excepting in both feet. The pulse was small and very

* It is afterwards stated that the soles of both feet were affected with most painful cramps.

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feeble, the pupils were not affected, and the mental powers remained to the last undisturbed. Milk, iced drink, emollient enemata and blisters to the extremities were the means used, but without avail. The patient died on the following day, 28 hours after the swallowing of the poison.

The body was examined 43 hours after death. The stomach, much distended with gas, contained several spoonfuls of a turbid, inodorous fluid; its mucous membrane was quite exempt from any appearance of inflammation or unusual vascular congestion, but its texture was much softer than usual, so that it could be easily detached from the submucous tissue in the form of "un detritus pultacé." Throughout the whole tract of the intestines, the muciparous glands were observed to be very prominent and distinct, and in the lower third of the ileum, the areæ of the conglomerate glands were of a livid colour. The other viscera did not exhibit any obviously abnormal appearances.

Observations. The symptoms in these two cases were quite alike, and sufficiently prove that the action of colchicum in large doses is on the nervous system, and may prove fatal, without inducing any excessive evacuations. The circumstance of the cramps being confined to the feet in both cases deserves to be attended to. There is no mention of this symptom having been observed in the case recorded several years ago in the Edinb. Med. and Surg. Journal, of a man who died on the 3d day after swallowing an ounce and a half of tincture of colchicum. In this case, there was also great diarrhœa, and delirium came on before death.

Bernt has noticed (vide Christison on Poisons) the cases of two children, who were poisoned by a handful of colchicum seeds, and who died in a day, affected with violent vomiting and purging. In the bodies of these children there was considerable redness of the stomach and small intestines; in the case mentioned in the Edinburgh Journal there was no morbid appearance at all to be found.

It is generally believed that colchicum owes its active qualities to the presence of veratrine, and as Magendie has shewn that this alkaloid, when introduced into the stomach, induces tetanic convulsions, we might have expected to meet with them in poisoning from colchicum; yet these symptoms were absent in the two preceding cases. —*Archives Générales.*

In reading over some of the late numbers of Hufeland's Journal we have met with the following truly-German account of the effects of an overdose of the tincture of colchicum. We give the report, nearly as it stands in the Journal.

That the colchicum, first recommended and employed in England against the gout, should have met with a less favorable reception in Germany, we need not perhaps be much surprised, seeing that the disease is greatly less frequent with us than among the English. Climate, mode of life, and other influential agencies, may very possibly have contributed to have given to *our* enquiries a different colouring, and to *our* observations very different results, from those which have been noticed by foreigners. The effects of colchicum are, according to the unanimous reports of all witnesses, purely and altogether physical. It appears to exert a specific effect on the nerves of reproduction, on the ganglionic system, on the skin, kidneys, the mucous membranes, and in an especial degree on the function of secretion (und uberhaupt auf das secretionsvermogen.) It is, in all probability, owing to its power of causing an increased flow of the intestinal secretions, and of removing venous plethora, that colchicum is so useful a remedy in gout.

An old gentleman, having taken a large dose of colchicum, was attacked soon afterwards with headache and a peculiar irritation of the cerebral nerves. His *corporeal vision* became more acute, and his *intellectual* vision so much more obtuse, that he could not now explain the words, which he read with his sharpened sense.(!) The movements of the tongue were difficult and irregular. The stomach and bowels were not affected.

(Voila! a sample of some contents of the German journals.—*Rev.*)

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Clinical Review.

GUY'S HOSPITAL.

GUY'S HOSPITAL REPORTS. No. II, FOR APRIL, 1836, AND No. III, FOR SEPTEMBER, 1836. Edited by L. H. BARLOW, M. A. &c. &c. &c., and J. P. BABINGTON, M.A. &c. &c.

These Reports continue to be published with a spirit equally honourable to the medical officers of the institution, and to the editors themselves. We hope that the publication will be persisted in, for the facts are valuable, and their authenticity undoubted. We shall take care that the principal are more widely disseminated than they can be in their original form, and that the Physicians and Surgeons of Guy's Hospital shall obtain the credit which they merit—that of taking the lead among their corps in rendering the stores of information contained within the hospital walls, available, as far as possible, to the whole profession.

We have fallen into arrears with these Reports, and two numbers lie on the table before us. The second number has been scarcely noticed, and the only article which we have taken from the third, is contained in our present Periscope.*

In this large mass of reports the difficulty consists in selection. We shall notice those which appear to us to possess most immediate and practical interest, or which bear on some intricate or curious question.

I. SOME OBSERVATIONS ON THE NATURE AND TREATMENT OF GANGLION, BUNION, &c. &c. By Mr. ASTON KEY.

Mr. Key seems to doubt whether a ganglion is a true bursa mucosa, because it is found where naturally bursæ do not exist. The fact, however, is that the pathology of the bursæ themselves is by no means clear, for they appear to be capable of being developed in the common cellular tissue, in spots where, naturally, they are not to be found. Thus they have been found on the ends of a bone after amputation, covering exostoses, and so on. Nor are the contents of bursæ mucosæ of uniform character. In one case we have little more than a sort of serous exhalation, the fluid being barely albuminous—in another we have a thick glairy fluid—in a third, we have a fluid mixed with the "melon-seed bodies." Amidst these varieties it is difficult to determine whether a ganglion is or is not a bursa mucosa, for both seem to spring up under nearly similar circumstances, and both seem to be frequently developed from the common cellular membrane. Be this as it may, it is our object to cure a ganglion. Let us hear what Mr. Key has to say upon this point.

"The treatment usually adopted for those situated on the back of the wrist-joint, is, to burst the cyst by a sharp blow with a book or any other hard body. If well aimed and sharply struck, it often effects the object of breaking it down; but it as frequently fails, either from the firmness of the cyst, or from the unskilfulness of the blow, or from want of sufficient resistance afforded by the wrist. It is also a painful remedy, and is occasionally productive of more subsequent inconvenience than the ganglion had occasioned. The more simple plan is, that of making a small puncture with the point of a lancet; or a cataract-needle, when the tumor is small. There is no fear to be entertained of inflammation taking place; as the cyst is little disposed to inflame, and the closure of the opening, after the contents have escaped, by means of a band or piece of plaster, is a sufficient guard against its occurrence. I have never seen or known any mischief to arise from the operation of puncturing these ganglia; and their return is equally prevented as by any other mode of treatment.

* Experiments of Sir A. Cooper on the vertebral and carotid arteries.

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For the small tumors that occupy the base of the palmar side of the fingers, the puncture is the only remedy. Blisters or blows are ineffectual: the former are very slow in operating, and rarely succeed in removing them; and blows cannot be struck with sufficient accuracy to ensure a rupture of the cyst. The cataract-needle is the most convenient remedy: the tumor being sensitive, the patient experiences some pain in its introduction; but it is momentary, and the relief afforded is complete.

When the swelling is situated over the back of a joint on the extensor tendon, pressure should be kept up for some weeks after the evacuation of the cyst. A gentleman, who was much in the habit of writing, applied to me for a swelling of this kind on the first phalangeal joint of the right index: he complained of pain and weakness in the use of it, and was unable to employ the finger steadily in writing. A small puncture was made in it, and about a drachm of crystalline fluid escaped: a piece of ribband was bound over the joint, and firm pressure was thus made on the cyst. The fluid did not collect again; and by wearing the ribband for a few weeks, in order to secure and steady the finger when employed in writing, he regained the perfect use and strength of it.

I once punctured a similar swelling over the tendon of the trochlearis superior muscle of the eye; and it never shewed any disposition to return.—Occasionally, the part that has been the seat of the ganglionic enlargement becomes thickened after its contents have been allowed to escape; and a slight hardness remains, but does not interfere with the use of the part."

We fear that Mr. Key does not say very much in favour of the puncturing ganglia, when he tells us it is as successful as any other plan of treatment. The fact is, that so far as we have seen neither bursting nor puncturing them is, in general, successful. We have frequently tried both methods, but rarely with the effect of obtaining a permanent cure. On the whole we prefer puncturing, but the young surgeon must not anticipate a great deal from it. Fortunately the complaint is generally little more than an inconvenience. We have several times seen a ganglion form over the tendon of the tibialis anticus near its insertion. It is troublesome, in consequence of the pressure of the boot. Puncturing and subsequent pressure succeeded in the case of a gentleman who was lately under our care.

Enlarged Bursa over the Patella.

Every student knows this as the "house-maid's knee." For a slight case pressure with a good knee cap is sufficient. If the bursa becomes inflamed, we must leech and blister, and use pressure subsequently.

Supposing that the bursa is large and troublesome, which it rarely is, unless the cyst is decidedly thickened, pressure is then insufficient for its cure. Mr. Key in this case recommends the employment of a seton, which, he says, is productive of less annoyance to the patient than a blister.

"If a few threads be passed through a ganglion patellæ of one knee, and a blister applied to another on the opposite limb, the patient invariably, I have noticed, complains of more suffering from the blistered surface than from the suppuration caused by the seton: and this is in accordance with what we know of the sensitiveness of the skin, compared with the sensibility of a bursa, even in a state of inflammation. The pain complained of during the stage of acute inflammation is inconsiderable; and the moving the threads, during the process of suppuration, occasions but little uneasiness. Sometimes a little feverish excitement is produced by the pus not escaping freely from the apertures, which, being retained, becomes decomposed: this inconvenience is remedied by keeping the openings, where the silk enters, free and clear. The seton should be kept in for several days after suppuration is established, in order to promote granulations, and to facilitate the escape of the pus. Even where the ganglion suppurates of itself, the seton may be used with advantage, towards accomplishing these two objects."

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When the cyst is decidedly thickened, the tumor of any size, and the inconvenience such as to make a patient desirous of something decisive being attempted, we agree with Mr. Key that blisters are very troublesome, and very uncertain. The choice of remedies lies in such a case between the seton and incision. The former is the milder remedy, the latter is the surer, and we think it would be usually the quicker one. If the bursa is laid open, and the cavity dressed in with lint, we may feel confident that it will be totally obliterated. But perhaps the seton would not offer the same degree of certainty. In hydrocele, where, indeed, the sac is generally larger, the seton is not so efficient as incision. The selection of the one method or the other must, after all, be left to the judgment of the surgeon, and depend on the circumstances of the case.

When the bursa has been enlarged for some time, has been subjected to pressure, and has been repeatedly attacked with slight or with severe inflammation, the cyst becomes extraordinarily thickened, the cavity much diminished, and frequently in their interior are seen those "melon-seed" bodies, evidently fibrinous, which have frequently attracted the notice of surgeons. For the benefit of our younger readers we extract a short descriptive passage from the report.

"These hardened ganglia cause great uneasiness to the subject of them; and incapacitate the person from bearing on the part in kneeling, as well as weaken the limb in the act of extension. The appearance of these tumors, when they are laid open, sufficiently indicates their manner of growth, and also the mode in which the loose bodies, resembling melon-seeds, that are often found mixed with their more fluid contents, are produced. The drawing, *Fig.* 5, shews a section of one of these indurated swellings: the size of the cavity is often small in proportion to the whole mass of the swelling; the principal part of which is made up of the thickened parietes. These are seen to consist of layers of condensed fibrine, resembling ligamentous structure, and joined together by a similar tissue. The cavity presents the latest deposits in various forms, but all partaking of the nature of fibrine: in one part are seen shreds of adhesive matter, as if recently effused, adhering at different points of the cyst: in other parts, the effused fibrine assumes a more globular form, with thin peduncular attachments. It is these that give rise to the melon-seed bodies, that may often be seen, in large numbers, floating in the serum. Motion, friction, and pressure give them the flattened ovoid figure; and the peduncles, being thin, break, and allow them to escape from their attachments, and to become loose bodies."

From Mr. Key's description we should be led to suppose, that these bodies are only found in bursæ with greatly thickened parietes. This, however, is not the case. We have seen them in the suprà patellar bursa, when its walls were very little thickened, and they are not uncommonly seen in enlarged bursæ about the wrist and over the inferior angle of the scapula, when the cyst is even thin.

Mr. Key observes that the operation usually performed for such indurated cysts on the patella or its ligament, is excision. He recommends the seton where the tumor is large. It appears to us, from the cases we have seen, that the seton is scarcely applicable to those to which excision is. The latter is adapted for the bursa when it is very indurated, and the cavity almost obliterated. The seton or incision is more appropriate where there is still a cavity, and the walls are thickened. If either incision or the seton were employed, where the cyst has almost become converted, as it occasionally is, into a solid tumor, we should conceive that the cure would be very tedious at the best.

Mr. Key takes no notice of an accidental consequence of enlarged patellar bursæ which we have witnessed several times. While the parietes of the bursa are yet thin, it becomes, from some cause or other, inflamed, and the inflammation extends to the surrounding cellular tissue. Suppuration occurs both in the bursa, and on the outside

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of it, and, in some instances, ulceration lays open the bursa into the suppurating cavity around it. The case looks formidable. The knee is much swollen, the integument is red, there is fluctuation, the joint is very painful, and there is pyrexia. An inexperienced surgeon would suppose there was suppuration in the synovial cavity—an experienced surgeon, of course would not. Incisions properly directed, evacuate the pus, and are generally successful. In one instance we saw the patient, an elderly female, sink.

It must not be supposed that the seton is always a safe remedy. Mr. Key does not allude to the risk that may follow its employment in some cases of enlarged bursa.* Yet it is right that surgeons should be aware of its occasional dangerous effects. It is not very uncommon for the bursa situated over the inferior angle of the scapula to become enlarged. In a case in St. George's Hospital, in which Mr. Walker passed a seton through this bursa, inflammation and suppuration ensued in the surrounding cellular membrane, the shoulder-joint became implicated, matter formed in it, and the patient died from the violent constitutional disturbance.

In another case at the same hospital, low fever succeeded the introduction of the seton, and the patient was destroyed by purulent deposits in the lungs.

We have heard of another case in private practice in which the same operation was fatal: and we saw a patient *nearly* die from the introduction of a seton into one of the *vaginal* bursæ on the dorsum of the wrist. Diffuse inflammation of the cellular membrane of the fore-arm followed, and, as we mentioned, the patient nearly died. Of course the more strictly subcutaneous the bursa is, the less risk will there be from the use of the seton.

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* It should be observed in reference to this and some other apparent omissions on Mr. Key's part, that he is speaking rather of thickened bursa, or ganglion, than of enlarged bursæ, in general.—*Eds.*

Distortion of the Foot from Pressure.

Mr. Key makes some remarks on the inconveniences and distortions resulting from undue pressure on some parts of the tarsus.

The first deformity he describes is that which resulted from the use of boots so short, that they compressed the foot in the direction of its length. The foot had been thus made to assume a curved direction: the arch of the tarsus had been considerably increased, producing a large projection on its dorsum, and a corresponding hollow in the sole, rendering the foot altogether shorter than nature had intended it to be. The altered form, however, was the least part of the inconvenience; for the act of progression had become uneasy and cramped. By the unnatural strain created upon the top of the arch at the junction of the os naviculare and os cuneiforme internum, the ligaments had been inflamed, and had become thickened; not, as in the case of the patella, forming a bursal cavity, but giving rise to a painful and indurated swelling, which gave pain under the pressure of the boot, and rendered the foot stiff and uneasy in the act of progression.

2. "A remarkable instance of this kind of deformity, but carried to a greater extent than in the former case, occurred in a boy who was admitted into the hospital with a sore on the ball of the great toe. The lad had been observed to walk lame for a great length of time, in consequence of a small sore, which had resisted all the ordinary means of treatment under the hands of an experienced country practitioner. A lady of the village where he resided obtained admission for him into the hospital. The sore on his foot was a circular foul ulcer on the ball of the great toe; not deep, but of an unhealthy character. The shape of the foot immediately struck the eye as being peculiar and somewhat deformed. The tarsus was more arched than usual; and the phalanges of the toes formed angles with the metatarsal bones, being thrown upward so as to make the balls of the toes more than usually prominent. The great toe was very much

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distorted upward; and the ball was thus rendered so prominent as to sustain much inconvenience in walking: the result was, that the skin became inflamed, and at length ulcerated. The change of shape which the end of the foot has undergone is at once perceived; and, by the boy's account, is clearly referrible to the undue pressure occasioned by his shoes. His father, in order to make his shoes serviceable, had them cased with iron round the edge of the sole. The effect of this was, that the shoes certainly did not wear out; but his feet, as they enlarged, were obliged to regulate their growth by the form of their iron case; and after he had worn his shoes twelve months, his feet became too large for them, and he limped from the pain which the compression occasioned.—His father compelled him, however, to wear his shoes; but could not prevent the feet growing; and the end of his foot assumed the form which the sketch exhibits."

In another instance small and short shoes caused similar distortion of the foot, and an obstinate deep ulcer at the under part of the ball of the great toe. On examination Mr. Key discovered one of the sesamoid bones exposed. He removed it, and, under a lotion of kreosote, the wound healed.

Bunion.

Mr. Key's description of the phases of bunion is more precise, and probably, more correct, than those we generally meet with. Bunion is usually considered to be the mere effect of pressure on the prominence of the metatarso-phalangeal joint of the great toe. Yet a cursory inspection of a foot ornamented with a bunion might lead us to suspect that, in many cases at all events, there is something more than this. Mr. Key's researches into the pathology of bunions tend to verify the suspicion in question.

The foot, we all know, is a double arch. Behind it rests on the inferior tubercles of the calcaneum—before on the phalangeal ends of the metatarsal bones. It does not, however, bear equally on all these, for the central ones are in some measure elevated from the ground, and the chief points of support are metatarsal bones of the great and the little toe. Thus we have a sort of arch extending from side to side at the distal ends of the metatarsal bones, in addition to the arch from before backwards, found between these and the calcaneum. In front of the metatarsal bones we have the toes, themselves rather curved as to be concave inferiorly, and extending the basis of the support, when, the heel being raised from the ground in progression, the great tarso-metatarsal arch no longer sustains the super-incumbent weight.

Such is the natural state of the foot, so far as the disposition of the bones is concerned. Occasionally that state is altered, and one of its alterations gives rise to bunion. Let us listen to our author.

"In young persons, who are allowed or forced to take exercise on foot, disproportioned to their strength, an alteration first ensues in the form of the tarsal arch. It becomes flattened, in consequence of the ligaments, and probably the bones also, yielding to the superincumbent weight. If the pressure be continued, the under part of the arch at length nearly comes in contact with the ground, and the patient becomes flat-footed. On the outer part of the tarsus a corresponding change is perceptible: its upper surface becomes depressed and hollow, and thus a general appearance of deformity and awkwardness of gait are the result. I have seen the young among the female part of many families gradually acquiring this tarsal deformity, from the excess of exercise which they were enjoined by their parents to take; and, in truth, while the error of our forefathers led them to confine girls within too strict limits, and to allow them too little use of their limbs, that of the present day runs into the opposite extreme; and many a young person has the proportions of her feet spoiled, and the foundation of bunion laid, by being kept on her feet for hours without rest or intermission. In some, the deformity is confined to a slight projection of the

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head of the astragalus, which has weighed down the inner strong plantar ligament. This gives an uncouthness to the walk of the girl, and renders the foot unsightly, but produces no other effect. The change of shape is not long confined to the tarsus; the joints of the toes suffer next, especially that of the great toe. The ligaments of this joint being strained in common with those of the tarsus, at length yield, and the toe is gradually forced outwards by the oblique bearing of the foot on its inner plantar surface. It is rarely that we find persons whose tarsal arch is flattened with a great toe in a line with the foot: it is usually inclined outwards, so as to form an angle with the metatarsal bone. The inner part of the joint thus forms an angular projection; slight at first, but becoming more and more prominent, as the pressure increases, and the joint continues to yield."

This kind of deformity in the arch of the foot leads to bunion. The lateral ligament pressed by the edge of the base of the phalanx becomes thickened and painful, and between its layers a series of small bursal cysts are found. As soon as one of these cavities is obliterated by inflammation, another is formed; and thus, by their successive formation, the effects of pressure are warded off. In some instances, the irritation extends as far as the bone, and a fungous growth takes place from the cartilage. So long as these cysts remain in the state here represented, but little inconvenience is experienced; the tendinous structure has adapted itself to the increased pressure it has to sustain, and the absence of inflammation exempts the person from pain. The pressure of the shoe, however, is frequently followed by paroxysms of severe suffering; the part becoming the seat of inflammatory action, and unable to bear the slightest pressure, either from without, or from the base of the phalanx in progression. Sometimes an abscess occurs on the most projecting part of the swelling, the pain attending which is most severe; and, from the unyielding nature of the texture, the matter is slow to discharge itself by the process of ulceration.

The treatment of bunion is of some little consequence; for it is a troublesome complaint enough. In the early stage more can be effected than at a later period. When the arch of the foot first begins to yield, and pain is experienced in walking, it is high time for the young lady to be transferred from the dancing-master to the surgeon.

"I have tried," says Mr. K., "some plans for the relief of the sufferer, and for the prevention of that greatest of annoyances, a painful bunion; and the best that I have contrived is the following. The offending toe is placed in a separate compartment of the stocking, like the finger of a glove: this again is enclosed in a separate part of the shoe, which is contrived by fixing a piece of firm cow-leather in the sole of the shoe so as to form a separate apartment for the toe. By these means it is kept in a straight line with the foot, or parallel to its fellows; and the pressure against the inner side of the joint being removed, the joint acquires a sufficient degree of strength, to enable it, in a few months, to dispense with the artificial support.

The common plan resorted to for the relief of bunion palliates the evil, in some degree, by removing the pain, and taking off the pressure; but it does not go to the root of the evil. The plasters on soft thick leather are agreeable to a painful bunion, by keeping the skin in a pliant state, and by protecting the part, in some measure, from the pressure of the shoe. The plan above explained effects both these purposes more completely, and prevents the further disposition to the disease, by correcting the inclination of the great toe. I have tried it in many instances of extreme pain; and have found the patient able to walk well, when provided with the shoe."

When an abscess has formed it is better not to be in a hurry to open it. If punctured too early, inflammation is apt to extend into the joint, and to give rise to tedious disease of the bone. Mr. K. has known gangrene of the foot, and death, ensue from opening an inflamed and suppurating bunion; and, in three cases, exfoliation of the bones,

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with a most tedious and painful suppuration of the surrounding structures. It is better to let Nature carry on the operation, without interfering with the knife: the abscess is slow in coming to the surface; but the joint beneath is secured; and we often have the satisfaction of finding that, the suppurative process being at an end, the sore heals, and the part loses its former extreme sensibility.

Nottingham General Hospital.

Spasms of the Muscles of the Neck.

Under this head Dr. Hutchinson has related some cases in our contemporary the Lancet, which are deserving of notice. They are considered by Dr. H. as exemplifying irritation of the nervous accessories or par vagum, arising at the base of the brain itself, or in the upper part of the medulla spinalis—" or indirectly reflected from disordered function in distant organs—especially the stomach." The most prominent symptom was spasm, more or less constant, of the trapezius muscles, or the sterno-cleido mastoideus. In one of the three cases, both trapezii were violently contracted. The spasm is very painful, and increased by any exercise. Perfect quietude was the sufferer's own choice. The sleep was undisturbed while it continued. The spasms continued through the day, with little intermission. The pulse was little affected. The appetite good; but the stomach was disordered. Two of the three cases occurred in sedentary and relaxed males—the third was a robust agriculturer of hard-working habits.

Case 1. A stocking-weaver, aged 60, pale and unhealthy, long subject to dyspepsy, was admitted into the Nottingham General Hospital on the 24th March, for wandering pains in the head, giddiness, impaired vision. The pains, which appeared neuralgic, extended down the neck. Appetite bad, tongue furred—bowels regular—pulse feeble, and rather increased in frequency—flatulence. Aperient medicines, &c. were ordered. On the 5th of April, the spasmodic affection already described came on, and continued, with more or less violence, till he left the hospital on the 24th June, when he was much relieved, but not cured. Indeed it was ascertained that he had as violent returns as ever, but he was lost sight of, and the event is unknown. Various remedies were employed, especially the carbonate of iron in herculean doses, with aperients, the shower-bath—blisters—counter-irritants of croton oil—leeches, &c. The counter-irritation appeared to produce more benefit than any other remedy.

That this was a neuralgic affection connected with, or depending on, disordered digestion, there can be little doubt amongst practical observers.—Why the sympathetic irritation should locate itself in one particular nerve, or class of nerves, in preference to others, it is often difficult or impossible to say. But in several instances, we thought we discovered the cause of the predisposition, namely, in exposure of the part affected to the influence of climate more than other parts of the body. We suspect that this is the most common cause of the morbid predisposition, especially in neuralgic and rheumatic affections.

Case 2. J. Turner, aged 30, an agricultural labourer, of athletic form, and florid complexion, was admitted on the 2d of December last. Six months previously he became affected with stiffness and pain in the back of the neck, extending to the head. The pain was of a darting, stabbing kind, with heat, and twitching of the trapezius muscle of the left side. This has continued all the six months, during which he was under the care of a highly respectable surgeon at Mansfield. It appeared that his general health, though now restored, was much disordered three months previously. The bowels are much confined—the tongue furred—complexion and eyes *yellow*—urine high-coloured—pulse 84—left trapezius tight as a cord, in which the sterno-

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cleido of that side participates. The carbonate of iron (ʒij. ter die) was ordered, with pil. col. comp.—Electricity. There was no improvement.—Acupuncture and increased doses of the subcarbonate. Relieved for a short time, when the spasms became more violent than ever, though the pain was less. By the 13th of December, he was much improved under the same treatment. The twitchings were as violent as ever. The veratria ointment was applied, and with apparent relief. On the 17th, however, we find him as bad as ever, or worse. The right pupil is dilated—pulse feeble and frequent—bowels regular—no rigor. The veratria ointment produced an eruption, attended with great heat. Had four grains of calomel and a dose of oil of turpentine. Slept better, but not at all relieved. Complains of pain (for the first time) in the head. Cupped to 14 ounces. 19th. The paroxysms are now more violent at stated hours—generally at 12 and 5 o'clock. *Was freely purged—relieved by the cupping—dilatation of pupil gone—pulse less frequent. Has omitted the iron since the 17th—sleeps better—painless.* Takes small doses of liq. arsenicalis and laudanum. On the 27th we find the pain of head returned. Was cupped—the arsenic discontinued, as the periodicity of the attacks has been removed—purgation. The spasms remaining undiminished, the head was shaved—moxa was applied on each side of the cervical vertebra—soda and hydrocyanic acid ter die—colocyth pills—shower bath, at first tepid, afterwards cold. This treatment was continued through all January (1836) with some improvement. In February and March he lived generously, pursuing the same medicinal treatment, with the addition of quinine. He was discharged cured early in April.

It may be proper to state, that the patient, and indeed the physician, ascribes the great increase of the complaint, on the 17th December, to cold.

Case 3. This was a stocking-weaver, of unhealthy aspect, who had had the complaint for four months before he came under our author's care.—Purgatives, the carbonate of iron, the moxas—blisters—iodine externally, &c. were the chief remedies employed for six or seven weeks, when he left the hospital at his own request, relieved, but not cured.

Excepting the peculiar *locale* of the complaint, there does not appear to be any essential difference between it and neuralgic affections in general. Spasms are by no means unfrequent accompaniments of neuralgia in other muscles, and especially long muscles. Twitchings are very frequent, or rather constant attendants on tic douloureux.—Without disputing, in the slightest degree, the propriety of Dr. Hutchinson's *methodus medendi*, we may be permitted to observe that, in our own practice, we have derived more benefit from pretty free and continued purgation, with smart doses of colchicum, than from steel or other tonics, especially at the beginning. The success of the treatment in the foregoing cases does not hold out any very great encouragement to other practitioners. Indeed Dr. H. himself does not seem to be very well satisfied with the results, when he informs us that, should another case occur, he will divide the *nervus accessorius*.—We have little faith in this *anceps remedium*, but sincerely wish Dr. H. success in its employment.

On Several Affections of the Liver.

1. Observations on Fatty Degeneration of the Liver. By Dr. Addison.*

Dr. Addison observes that so little is known, both of the nature and the symptoms of this affection of the liver, that any communications which tend to augment our information with respect to it are exceedingly desirable. Dr. Addison, whose zeal and abilities are well known, details the results of his own observations.

The appearance of a liver which presents the fatty degeneration, is described by Dr. A. in the following terms.

"It is observed to be of a cream or pale-yellow colour, figured irregularly

* Guy's Hospital Reports.

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with brownish or deep-orange spots. It is usually, though not always, more or less enlarged, and sometimes very considerably so.

When cut into, its interior is found to present an appearance somewhat corresponding to that of the exterior; excepting that the brown and pale-yellow tissues are much more uniformly distributed throughout the entire substance of the organ than they are upon its surface. It is sometimes softer, and more readily crushed between the fingers than is the healthy liver: sometimes, however, it is firmer than natural, and occasionally even of a scirrhous or almost horny hardness. It will often very perceptibly grease the scalpel, or impart an unctuous feel to the fingers; and, on being exposed to the flame of a candle, will yield a considerable quantity of fat. Although its absolute weight, when enlarged, may exceed that of the healthy liver, I am disposed to think that its specific gravity will, in perhaps the majority of instances, be found to be less; thus a liver apparently healthy was of the specific gravity 1·0625; whilst the specific gravity of two fatty livers, examined at the same time, was only 1·0275. I have, however, recently met with a case, in which the liver was not only much enlarged, but exceedingly dense and hard, and consequently, as I suppose, of great specific gravity."

Mr. Golding Bird, a very intelligent young chemist, analysed the bile, liver, and urine of a patient affected with this disease.

The bile was of a dirty brown colour, and contained in diffusion numerous granules of carbon. Many globules of oil appeared, after repose, upon its surface. After the addition of any acid, the most intolerable odour was evolved. The composition of the bile was:

Biliary matter with an appreciable quantity of very soft fat	6·0
Earthy salts (phosphates of lime and magnesia)	0·2
Osmazome, lactate of soda and common salt	1·0
Water	92·8
	100.

The liver was next examined, for the purpose of ascertaining the quantity of fat present. One thousand grains were cut into very small pieces, and boiled in repeated portions of alcohol; the solutions being filtered, whilst nearly boiling hot, through muslin. By this process, a solution of fat and osmazome, with saline matter, was obtained: the fluid was evaporated, over a vapour bath, to dryness; and the residue digested in boiling water, to remove the salt and osmazome. The insoluble portion consisted of a soft brownish fat, very fusible, and possessing a peculiar and unpleasant odour: the quantity yielded by the one thousand grains was 47·6 grains, equal to 333·2 grains in each pound of the liver.

The urine was of very low specific gravity, only 1·007—quite neutral—held mucous flocculi in suspension—yielded a precipitate on protracted ebullition, which differed from albumen in not being precipitated by nitric acid—contained minute traces of the earthy phosphates—and left, after evaporation to dryness, a residue of a peculiarly bitter taste, not owing to the presence of bile.

The following appears to be the principal symptom on which Dr. Addison leans in diagnosis. It is a peculiar expression of the countenance, or rather a peculiar texture and aspect of the integuments. When strongly marked, it is indicative, if not pathognomonic, of the malady.

"It is purely integumental; as it is not confined to the face, but may pervade the whole surface of the body; although I am disposed to think that it is earliest observable, as well as most conspicuous, in the integuments of the face and backs of the hands. To the eye, the skin presents a bloodless, almost semi-transparent and waxy appearance: when this is associated with mere pallor, it is not very unlike fine polished ivory; but when combined with a more sallow tinge, as is now and then the case, it more resembles a common wax model. To the touch, the general integuments, for the most part, feel smooth, loose, and often flabby; whilst, in some well-marked cases, all its natural asperities would appear to

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be obliterated, and it becomes so exquisitely smooth and soft as to convey a sensation resembling that experienced on handling a piece of the softest satin. Whether this condition of the integuments precede or follow that of the liver, and whether the two are necessarily associated in every instance, I am by no means prepared to offer a decided opinion; but having, on several occasions, confidently and correctly predicted finding the fatty liver, from having observed the particular condition of the integuments just described, I have ventured to make the crude fact known to the profession, in the hope, that, attention being once directed to such a starting point, something more interesting, and of greater practical utility, may result from its further investigation."

M. Louis, it is well known, has dwelt on the frequent co-existence of a fat liver with phthisis, and even estimates, that it occurs in one-third of the whole number of phthisical patients in France; as in 120 cases, he met with 44 instances of the complication; and he even goes so far as to regard it as a mere part or consequence of such tubercular disease. He appears to have been led to this conclusion, by observing, that in almost every case of fatty liver there existed more or less indication of tubercular disease in the lungs; and that the development of the fatty degeneration of the liver is not materially influenced either by the age, sex, or constitution of the patient; except, inasmuch as these circumstances affect the phthisical disease, upon which he considers it to depend. All who are much accustomed to post-mortem examinations are familiar with the fatty looking liver so frequently found in the bodies of the phthisical. Whether this and the fatty liver described by Dr. Addison, which is attended by the peculiar condition of the integuments, and which may and does exist as a disease per se, are really the same organic alteration, or whether there are differences between them which have hitherto eluded observation, are questions which, for the present, must remain undecided. Dr. Addison will, no doubt, prosecute the inquiry, and the publication of his remarks will induce other physicians to do the same.

That fatty degeneration of the liver is not necessarily accompanied by tubercular disease, either in the lungs or elsewhere, is certain. Three such cases have occurred within the last two months under Dr. Addison's own observation. In two of the cases, no suspicion of disease of the lungs or of the liver had been entertained up to the period of the death of the patients. One of them, aged 32, died of organic disease of the brain—a second, aged 57, of pericarditis, succeeding an attempt at suicide. In another, we believe the third case, the state of the liver was predicted during life, from the condition of the integuments. In this case there was anasarca of the feet and loins prior to death, and it is doubtful whether this alteration of the liver may not give rise to dropsical effusions.

On the causes, the progress, and the results of the disorder, we possess no positive information. The conjectures of Dr. Addison upon these points may be cited, because they serve to exhibit what we do *not* know, and what we must therefore endeavour to learn. We shall cite them, and we trust that, ere long, the industry and the ingenuity of this talented physician will fill the hiatus, which his candour now points out.

"With respect to the causes of this fatty degeneration of the liver, very little, or absolutely nothing, is known. In most of the cases which I have met with, there has been either positive or strong presumptive evidence that the individuals had indulged in spirit-drinking; and indeed the most exquisite case I ever saw in a young subject, occurred in a female who had for some time subsisted almost exclusively on ardent spirits. On the other hand, the extreme frequency of the degeneration in France, where the people are but little given to such indulgences, throws considerable doubt upon such an origin of the complaint; whilst its great frequency there, in conjunction with phthisis, would almost lead to a belief that it has some connexion with a scrofulous tendency—

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a belief which, I confess, I am strongly disposed to entertain.

Connected with scrofula or not, it remains to be ascertained, whether it be in reality an original disease of the liver: or whether it may not, in every instance, be merely secondary to some other or remote disorder, is not yet determined. Future experience, also, must discover what are its immediate, and what are its remote consequences; —whether feebleness of the powers generally, and of the digestive organs in particular, be sooner or later induced by it, in every instance where patients escape other mortal diseases;—whether, by impairing the powers of the constitution, it may not, in some instances, prove rather a cause than a consequence of phthisis;—whether anasarca, or any other form of dropsy, be peculiar to certain stages or degrees of it;—and, lastly, what influence it exerts upon the brain and nervous system generally, and consequently upon the feelings and disposition of the individual."

II. Observations on Jaundice, more particularly on that Form of the Disease, which accompanies the diffused Inflammation of the Substance of the Liver. By Dr. Bright.

Dr. Bright proposes the following classification of the causes of jaundice:—

1. Congestion of blood in the liver. 2. Obstruction of bile in the biliary ducts, and more particularly in the larger ducts. 3. Chronic change in the structure of the liver. 4. Inflammatory action of the liver.

1. Congestion of blood takes place in the liver under various circumstances, of which the following are the most frequent:—Obstruction to the circulation in the chest, more particularly from valvular disease, or dilatation of the heart; constipation; pregnancy; and certain conditions of the circulation, connected with remittent and other fevers.

2. Obstruction to the passage of the bile in the larger ducts takes place from biliary concretions; from malignant or other growths in the liver itself; or in glands about Glisson's capsule; from changes in the coats of the ducts themselves; from inflammation of the duodenum; or from induration of the pancreas.

3. The chronic changes in the structure of the liver are of various kinds; sometimes the result of simple inflammatory action of a somewhat acute character, imperfectly subdued; at other times, the result of a very slow and chronic action, affecting either the secreting portion or the cellular tissue; —at others, the result of degeneration, or of malignant action taking place extensively throughout the organ.

4. The inflammatory action of the liver, which chiefly gives rise to jaundice, occurs in its substance; sometimes, if unchecked, going on to suppuration; but at other times producing a gradual change in the texture of the liver.

The gist of Dr. Bright's observations may be found in his account of the jaundice which arises from inflammatory action in the substance of the liver. His remarks on the previous forms are judicious, but need not be methodically noticed. There are two or three points to which we shall advert. They are these:—

a. In referring to the jaundice dependent on obstruction to the biliary ducts, Dr. Bright observes that the evacuations from the bowels, accompanying the complete retention of the bile, and occurring in cases where pressure is made on the common and perhaps on the pancreatic duct, are not undeserving of attention.

"I refer to the evacuation of fatty matter, more or less mingled with the fæces. In several cases where the obstruction has been in the pancreas itself, a considerable quantity of that substance has been seen floating, and completely separated from the fæces; of which another instance, besides those I have already published, has lately occurred to me in the hospital. But in most cases of very obstinate jaundice, accompanied by complete obstruction, an unusual quantity of fat has been detected; and my friend, Mr. G. O.

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Rees, has kindly undertaken several analyses for me, with a view of ascertaining this fact; the results of which may, at some future time, be more fully stated."

b. Organic alteration of the liver is well known to be sometimes attended with diminution, not augmentation, of its bulk. Dr. Bright's observations on the structural condition of the organ may be quoted.

"The liver is sometimes increased in its size; but very frequently quite the contrary, the organ having evidently undergone contraction in the progress of the disease; indeed, I have, in some cases, most distinctly traced its enlargement in the beginning of the attack, and its gradual diminution towards the more-confirmed stages of disorganization. Though the larger ducts are pervious, and a certain quantity of imperfect bile is found in the gall-bladder, yet the whole substance of the liver is frequently tinged by the bile retained within its smaller ducts. A general granular appearance exists throughout the liver, as if the acini were drawn into masses, surrounded by thickened cellular membrane: and if, without being injected, a portion of liver in this state is macerated in water for several weeks, the little granules assume the appearance of adipocire; and may be easily washed out by a stream of water, leaving a fine tissue of vessels and cellular membrane floating in the water. When the disease has gone further, the bands of cellular membrane are seen intersecting the structure, and forming more decided septa between the masses of acini. These are the more common appearances, where, from frequent overstimulation, gradual change in the structure of the liver has given rise to jaundice."

c. Where the structure of the liver has undergone some chronic alteration, ulceration of the lining membrane of the colon is a common consequence. In no case is it more frequent than when the true fatty degeneration, which is seldom accompanied by jaundice, has occurred.

We may now proceed to that form of jaundice which depends on a state of inflammatory action, more or less generally pervading the substance of the liver. Dr. Bright remarks that it is highly probable that in different cases different constituent portions of the liver are particularly implicated—a probable conjecture, that implies our yet imperfect acquaintance with the affection. The causes from which this inflammatory jaundice arises are frequently very different, and, besides irregularities of diet, include atmospheric exposure, the effects of external violence and injuries, the irritating effects of biliary concretions and of the retained bile, and perhaps the stimulating action of mercury. The symptoms likewise differ in many respects from those of the other forms, though not separated by sharp and abrupt lines of demarcation; and the changes produced on the substance of the liver are decidedly different, affecting much more generally the secreting portion than the connecting cellular tissue, and probably involving the branches of the portal vein in preference to other parts.

Dr. Bright divides the cases into acute and chronic. We cannot materially abridge his history of the disease, which we shall give with some slight curtailment in his own words.

"It frequently comes on very insidiously, with symptoms and feelings of general constitutional derangement, depression of spirits, slow pulse, oppressed breathing, wandering abdominal pains, constipated bowels, and sometimes sickness of the stomach. In a day or two, the conjunctiva becomes tinged; and in a few days more, there is universal bright bilious suffusion of the skin. It is now found that the pulse is either accelerated, or sometimes still oppressed; and frequently, on pretty severe pressure about the region of the liver, some degree of tenderness is manifested; while in other cases, pressure produces little or no immediate suffering, but the pain comes on gradually a short time after the pressure has been made, and continues for hours or days. Cases of the less acute kind generally yield readily to treatment, if it be adopted early; and they form a large proportion of the cases of simple

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jaundice which present themselves in practice. In other cases, the inflammatory action is attended with much more severe symptoms, with considerable pyrexia, quick pulse, flushed countenance, and dry tongue, while a jaundice of the most intense colour is diffused over the whole surface. The stools are, both in the more and less acute cases, of a light colour; but less decidedly so, and subject to greater variations than when the obstruction is mechanical; and occasionally, after a few days, give little evidence of deficiency of bile. The urine is deeply tinged. When the disease assumes its more active and febrile form, those symptoms referrible to the brain and nervous system, and which appear to depend upon the deleterious effects of bile circulating in the blood, are more intensely marked than in any other form of jaundice; and the tendency to hæmorrhage sometimes comes on very early, and is excessive. In some cases, rigors, which assume the form of irregular intermittent paroxysms, form a prominent feature, as the disease advances; and then it often happens, though not always, that suppuration is established; and this may be going on to a great extent, while still the jaundice has rather decreased, or varied exceedingly in its intensity."

The changes which occur in the structure of the liver vary with the period at which the disease has terminated fatally. In general the size of the organ is not materially increased, but not unfrequently perceptibly diminished. There is no accumulation of bile in the minute ducts, and the yellow tinge of the liver is not considerable. The gall-bladder contains little bile, and its mucus is sometimes scarcely coloured by it.

When the disease has terminated early in its course, the whole liver feels rather soft and flaccid; the surface appears variegated, of a light-yellow, and dark-red or purple, in patches; and certain portions project above the rest, which, when cut through, sometimes prove of a softer texture, and even to be undergoing a process of change or disorganization; and portions of the same kind are intermixed throughout the whole substance of the liver; while, at other times, the yellow portions are harder than the surrounding substance.

When the disease has not terminated early, and the colour of the skin has subsided to a light lemon yellow, the structure of the liver is found extensively altered, and a great many of the acini are apparently incapable of receiving their due quantity of blood. They are then of a whitish-yellow colour, and rather hard and contracted, than enlarged; and these altered acini are seen in groups and clusters, which, on careful examination, will generally be found to follow the course of the divisions of the portal vessels, so as to be disposed around them like a sheath, which sometimes extends to the thickness of a quarter of an inch.

In other cases, this diffused inflammation of the substance of the liver ends in suppuration. We find a multiplicity of abscesses, all of which seem tending to discharge themselves into branches of the portal vein, which then assumes a most unhealthy suppurative appearance along large portions of its course.

Dr. Bright's suggestions with regard to treatment are such as would probably present themselves to the mind of a well-informed practitioner. Yet they may be usefully extracted. That treatment must, of course, be essentially antiphlogistic—general bleeding in the more violent forms—cupping and the application of poultices in the less severe ones.

"The combination of calomel, antimony, and opium, must be occasionally administered; and antimonials must be combined with the purgatives, which, in the form of pills, should be given to act regularly on the bowels, and should be aided occasionally by the sulphate of magnesia and other saline purgatives: and, in many cases, the saline purgatives, alternated occasionally with mercurials, are sufficient to cure the disease. A free and uninterrupted action from the skin is most desirable; and to promote this more effectually, the warm-bath may be very advantageously employed; and the poultice,

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while it restrains the patient in bed, assists forcibly, as a diaphoretic measure.

Under treatment of this kind, a very large proportion of cases are completely cured: and where the result is otherwise, it generally arises from some complication of diseases; most frequently from previous disorganization of the liver, or from neglect, on the part of the patient, in not applying for medical aid, or in not steadily pursuing the plan laid down: for it is not uncommon to find persons inclined to make light of an attack of jaundice, if the pain or inconvenience attending it is not such as to prevent them altogether from pursuing their usual occupations. Nothing, however, can be more injudicious; and it is the duty of the practitioner to impress this upon his patient: for it can never be a matter of slight importance, that either obstruction or inflammatory action should exist in the intimate structure of a secreting organ, still less in an organ so delicately complex as the liver: and there is no reason to doubt, that although, even without treatment, an attack of this kind may pass off, the liver will be some time before it has completely recovered; and thus a tendency to relapse, or to a renewal of the complaint, may occasionally be observed, shewing itself at longer or shorter intervals throughout life, and terminating, at length, in the destruction of all the powers of the stomach, the ulceration of the colon, miserable emaciation, or universal dropsy."

Eight cases follow, and occupy twenty pages of the Report. It is unnecessary, indeed it would be impossible, for us to detail these. A sample of a slight case, and of a severe one, will be sufficient to illustrate the preceding observations.

CASE 1. *Jaundice following Intemperance and Exposure.—Cure.*

W. B. æt. 18, admitted Nov. 30, 1831, with jaundice of a clear bright tinge. He had been a hackney coachman for five years, and had been addicted to porter and spirit drinking, and to gonorrhœas. Six weeks before his admission his mouth had been made sore by mercury—seven days before admission, he found his eyes yellow, and jaundice followed. The abdomen was tense and hard—the tongue white and coated—the bowels not open since the preceding day—pulse 82, full, but sluggish. He complained of pain in the right side of the abdomen, which he said had been coming on for three months.

Habeat Pilul. Colocynth. c̄ Cal. gr. xij. statim; et Haustum Sennæ vespere, si opus fuerit.

Mistura effervescens.

Dec. 1. Jaundice more general and deep. Two copious stools, solid, and of a dark clay colour: urine of a deep colour, like the infusion of senna: pulse 81, full and jerking: tongue cleaner.

Habeat Hydrarg. Submur. gr. i. sextis horis.

The calomel was repeated in these doses for ten days; after which blue pill was given, at longer intervals; and during the whole time infusion of senna and magnesia, and sulphate of magnesia, were repeated till the bowels were freely opened. After the lapse of one month, he was discharged, quite well.

The next case was that of a free drinker, with nearly similar symptoms. The jaundice had followed exposure to cold. Cupping, calomel, taraxacum, and subsequently blue pill set the patient to rights.

The remaining six cases were all fatal, and dissection rendered them complete. In two suppuration occurred. It may, perhaps, admit of question whether it is so clear as might be wished, that inflammatory action was in all the cause of the symptoms, indeed the distinction between jaundice depending on congestion of the liver, and that which arises from inflammation of its structure, though evident on paper, is not always so precise in practice. In the fourth case of the present paper, the evidence of inflammation in the liver is by no means satisfactory.

We shall present an abstract of the fifth case, because it was one which occurred early to our author, and first drew his attention particularly to the subject.

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Case. *Jaundice, without Mechanical Obstruction—Fatal.*

Mrs. S. aged 28, a drunkard, was admitted Aug. 6, with suspicious sores, for which she was ordered Plummer's pill and sarsaparilla. On the 13th Nov. she was turned over to Dr. Bright. She had had pain in the abdomen for a week, and had been jaundiced for two days—the bowels were rather confined—the pulse was moderate, but quick. *Cupping—Hyd. c. Creta—Ol. Ric. followed by leeches.*

The yellowness increased—the abdominal tenderness continued—the stools remained clayey. The pulse was about 96—there was thirst—occasional sickness. Cupping, leeches, mercurial purges, blue pill, and fomentations constituted the treatment.

On the 1st of December, her pupils were rather dilated, her utterance was indistinct, and there was loss of power in the left hand. On the 2nd, she was drowsy—in the evening she was screaming loudly—and on the 3rd she was quite comatose. On the 4th she died.

Dissection. The whole body was intensely yellow.

The whole of the vessels and sinuses of the brain were unusually loaded with blood—on slicing the brain many bloody points made their appearance—the ventricles were unnaturally dry—the arachnoïd serum was yellow.

The liver weighed only two pounds five ounces. It was soft or flaccid to the touch; quite free from any mark of peritoneal inflammation. Its external appearance was mottled dark-red liver-colour, with yellow stone-colour. The acini were pretty distinctly to be traced throughout—red at their centres, and yellow in their circumferences; and in most parts the yellow bore a large proportion to the whole. The gall-bladder was contracted; and contained about half a drachm of mucus, very slightly tinged with green. The ducts were all pervious and healthy, and were not even stained with bile.

As there was no obstruction to the passage of the bile, and as there was not any trace of it in the liver, it must have been absorbed into the system almost as soon as it was formed. Dr. Bright "is inclined to consider this as an example of a decidedly inflammatory state of the organ." It may be so, and yet it is difficult to say where the positive evidence lies. The symptoms and organic lesions tend to support the idea of inflammatory action, but neither can be said to prove it satisfactorily. On the other hand, the peculiarity of the hepatic circulation must be taken into the account, and will induce us to demand proofs of vascular action, somewhat different from those obtained in organs freely supplied with arterial blood. On the whole, we may conclude that the subject deserves investigation, and that further researches may reasonably be expected to clear up what is yet obscure, and to determine what is still indefinite.

We shall terminate this notice with a case in which suppuration took place in the substance of the liver.

Case. *Slight Jaundice — Numerous Abscesses in the Liver.*

S. T. aged 47, admitted Jan. 6, 1836. Two months previously, having suffered for a short time from pain in his right side, he was exposed to damp and cold. A rigor was the consequence. The rigors returned, and the pain in the side increased. At the time of his admission they generally came on at the hours of eleven in the forenoon, and four in the afternoon; and were generally preceded by a violent cough, unattended by expectoration. He likewise, frequently, had a rigor when he awoke out of his sleep. He had never been completely jaundiced; but had now a very sallow complexion, with a decided yellow tinge; and the conjunctiva tinged with bile, while the countenance was peculiarly anxious and dejected: tongue covered with a yellowish-brown fur in the centre, and a whitish fur at the edges. He complained of pain in the upper part of the abdomen, and also in the loins. The slightest pressure on the region of the liver gave him considerable pain: pulse irregularly intermittent, and jerking: some headache. There seemed scarcely any room to doubt that the liver was, in this case, the seat of inflammatory disease.

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Cupping, blue pill, calomel, and carbonate of soda in full doses constituted the treatment.

Occasional rigors—slight jaundice—pain, sometimes greater, sometimes less, in the right side—a pulse quick, sharp, or full, and intermittent—a dry tongue—and a warm skin, composed the principal symptoms. On the 13th the patient died.

Dissection. "The skin was universally jaundiced, of a light colour: body by no means emaciated. The lung on the right side was pushed up by the liver, which rose as high as the fourth rib; but the lung itself was perfectly healthy. The liver was decidedly large; and adhered pretty generally to the parietes, and, on its concave surface, to the different viscera on which it rested. Some parts of the substance of the liver appeared healthy; but the whole of the right lobe was pervaded by numerous abscesses; so much so, that a section through the thick part divided at least thirty, chiefly filled with yellow and tolerably healthy pus. Many of them were contained in cysts not unlike, in texture, the parietes of a suppurating tubercle in the lungs. At the thin margin of the right lobe, one of these abscesses shewed itself externally, presenting an irregular gangrenous patch, of the size of a half-crown, and, when cut into, proved a sloughing abscess: but the peculiarity of all this extensive suppuration was, that it seemed to implicate most generally the system of the portal vein; for throughout we cut into large trunks of this vessel filled with pus, and apparently in free communication with the abscesses, both large and small; so that it was very difficult to say, from the inspection of the parts, whether the mischief began in the veins, or was communicated to them. The veins themselves, however, were in a state of suppuration: they were thickened, and their surfaces appeared imbued with suppuration, like the walls of one of the abscesses. The veins going to the cava were quite healthy, and contained blood of natural appearance. The large ducts of the liver were also healthy; and the gall-bladder contained a full ounce of light-coloured bile. The diaphragm, where it had been in contact with the liver, was beginning to be implicated in the suppuration; and the mark was visible through its whole thickness, discolouring the pleura."

CASE OF CYSTINE OR CYSTIC OXIDE CALCULUS, WITH REMARKS ON THE EXISTENCE OF CYSTINE IN URINARY DEPOSITS. By Mr. GOLDING BIRD.*

Cystic oxide is not a frequent constituent of urinary calculi. It was discovered in 1810 by Dr. Wollaston, and most of what we know of it is due to that physician, and to Drs. Marcet and Prout. Mr. Bird is led to think that cystine is more common, both as a constituent of calculi and of urinary deposits, than has been supposed.

On the physical and chemical characters of cystine and of cystic calculi we need not dwell. We refer those who are ignorant of them to the work of Dr. Prout. But we may observe that although the cut surfaces of nearly all the cystic calculi that have been described, have exhibited a blueish green tint, Mr. Bird had lately an opportunity of examining a calculus of this kind, whose section was of a yellowish-brown tint, bearing no distant resemblance to the colour of the fawn-coloured urate of ammonia calculi.

In the museum of Guy's Hospital, are ten specimens of cystic oxide calculi. Four have been described by Dr. Marcet; six have been placed in the museum subsequently. One of these calculi is remarkable for its singular shape, in which it exactly resembles a lady's ear-drop, having probably assumed this form during its residence in the pelvis of the kidney: it is about an inch long, and, like the others, possesses a pale-green colour: indeed, from the frequent occurrence of this tint in calculi composed of cystine, it has been looked upon as being quite characteristic of its presence; and this circumstance, Mr. B. is inclined to think, has been the cause of these calculi, when

* Guy's Hospital Reports.

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not possessing this colour, being occasionally overlooked in large collections.

A calculus composed entirely of cystine has lately been removed from the urethra of a boy by Mr. Key, and as the particulars of such cases are rare, and it is desirable to ascertain the circumstances under which cystic oxide calculi are formed, the case deserves to be recorded. It is related in Mr. Key's words.

"The subject of the cystic oxide calculus was a young gentleman, aged about 12 years, of a delicate complexion, with hair and eyes inclined to auburn, and in his frame exhibiting general delicacy of texture. His parents, though healthy, are not strong persons, but have not been disposed either to calculous disorders or to gout. The prevailing disposition in the family is a tendency to strumous affection; under which, in a somewhat aggravated form, a younger member of the family is now labouring. The boy from whom the stone was taken had never, as far as his mother could recollect, shewed signs or expressed symptoms of kidney-affection; nor had his urine been noticed as peculiar. The only circumstance that his parents had remarked, was, that he could not eat the meat at school, on account of its being less nicely dressed than that to which he had been accustomed at home; and his diet, therefore, had been less nutritious than usual. The attack which brought the stone to light was sudden. On the afternoon of the 24th of May 1836, he complained of difficulty and pain in voiding his urine; and in the evening he was able to void only a few drops at a time, and at frequent intervals. About midnight, the urine ceased to flow, even after violent efforts to pass it; and I was requested to see him. On attempting to introduce a catheter, I was checked by a foreign body lodged in the urethra, just anterior to the scrotum, which entirely occupied the canal of the urethra, and seemed to be firmly impacted. From its size, I judged it to be too large to escape by the glans; and therefore extracted it by an incision through the corpus spongiosum. It proved to be a rather large calculus, of an oval shape, and studded with minute tubercles: its colour struck me as being peculiar: it had not the nut-brown or reddish colour of the lithic acid, but the amber tint of the cystic oxide formation, and also the translucent appearance characteristic of that species of calculus. The wound has healed quickly; and his health remains good. He is passing the Summer at the sea-side."

The calculus presented, on making a longitudinal section of it, the same confused crystalline structure as the other specimens of this species of calculus, but did not possess any of the green colour usually present; its tint being exactly that of the fawn-coloured urate of ammonia caculus: its specific gravity was 1·777. We need not mention its behaviour to chemical re-agents. That proved that it was cystine.

"I could not detect," says Mr. Bird, "the presence of muriate of ammonia in this calculus; although I have discovered this salt in almost every other species, having always looked for it since reading Dr. Yellowly's paper upon this subject in the Philosophical Transactions. As the boy, from whom this calculus was removed was under treatment when I received it for examination, I was exceedingly anxious to obtain specimens of his urine, to ascertain whether it deposited any thing, and if so, what this deposit consisted of. On mentioning this to Mr. Key, he very kindly procured for me, at different intervals, specimens of the urine; in which I very readily detected cystine, not only as a deposit (as I had anticipated), but also in solution. This urine was pale, of low specific gravity, generally being about 1·0148, without any action on litmus or turmeric papers; and contained, in diffusion, clouds of mucus, mixed with a white, crystalline deposit, which readily subsided to the bottom of the vessel, and closely resembled a deposit of the ammoniaco-magnesian phosphate; from which it was readily distinguished by a microscopic examination, presenting the appearance of flat six-sided tables, which I have already mentioned as quite characteristic of cystic oxide. On applying a boiling temperature to the urine,

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after the deposit had been diffused by agitation, it did not become clear, until after the addition of a considerable quantity of muriatic acid: acetic acid did not, under similar circumstances, dissolve it; as it would have done had the deposit consisted of earthy phosphates or oxalates. Ammonia, with the aid of heat, readily dissolved this deposit.

On submitting this urine to quantitative analysis, after being freed from the deposit by filtration, I found it to consist of,

Water	974.444
Urea, with alkaline chlorides, phosphates, and lactates .	5.7
Aqueous extract, with alkaline sulphates	14.7
Albuminous matter and earthy phosphates	4.8
Uric acid and adherent mucus	0.016
Cystine (cystic oxide) . . .	0.340
	1000.

I was surprised to find cystine in *solution*, in this urine, knowing its total insolubility in water: for this circumstance I am unable to offer any very satisfactory explanation. Perhaps it might be held in solution by the excess of acid in the biphosphate of ammonia, which is a constant constituent of urine; or even by means of carbonic acid, which exists in every specimen of urine I have hitherto examined; and which certainly appears to be the solvent for the earthy phosphates, when they exist in urine in an anormally large proportion; a fact that has been, in my estimation, fully proved by the late experiments of my friend Mr. R. H. Brett (*Med. Gaz. March* 1836). I may remark, that the urine, of which the analysis is above mentioned, was passed by the patient on May 28th, being four days after the removal of the calculus. I examined different specimens of the urine passed by the same patient at different intervals; viz. June 7th, 14th, and 27th; which differed from the first specimen, in the gradual decrease of albuminous matter and cystic oxide, and increase of urea: indeed, on that passed in June 27th, not a particle of cystic oxide could be detected: but whether this circumstance indicates the removal of the diathesis, or the formation of another concretion, must be left to time to determine."

Mr. Bird concludes by adverting to an opinion of Dr. Marcet and of Dr. Prout, "that the cystic diathesis generally exists, to the exclusion of other diatheses; and that this diathesis does not seem readily to change into any other."

Mr. B. does not think this correct, because a section of a calculus contained in the Museum of Guy's Hospital, exhibited, on close examination, the following substances arranged in distinct and separate zones.

1. A nucleus of oxalate of lime.
2. A zone of green cystic oxide, about $\frac{1}{12}$ inch thick.
3. A zone of urate of ammonia, *mixed* with fawn-coloured cystic oxide, $\frac{1}{10}$ inch thick.
4. A zone of green cystic oxide, about $\frac{1}{10}$ inch thick, resembling No. 2.
5. A layer of the urates of ammonia and soda, $\frac{1}{12}$ inch thick.
6. Alternating layers of urates of ammonia and soda, with oxalate of lime, about $\frac{1}{16}$ inch thick.

"The section of this calculus thus acquaints us with some very interesting and important facts; that not only can the cystic oxide *replace* other diatheses, but it can exist *simultaneously* with them. Thus, when this calculus was *first* formed, the oxalate of lime diathesis must have prevailed;—that this must have been replaced by the cystic oxides;—that, subsequently, the urate ammonia diathesis must have existed for a time contemporary with that of the oxide, and then disappeared, again leaving the cystic oxide diathesis prevailing: this, in its turn, had again been replaced by the diathesis of the alkaline urates; which finally alternated with the oxalate of lime, until the calculus ceased to increase. The examination of this calculus thus effectually disproves the assertions of the two chemists above mentioned, respecting the exclusive nature of the cystic oxide diathesis."

We cannot perceive that this one fact at all justifies the tone of brusquerie

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and dogmatism adopted by Mr. Bird. His good taste may reasonably be questioned, when it is remembered that the gentlemen, whom he addresses so rudely as two chemists, have done great service to the profession by their researches on calculous disorders, and dignified it by their high scientific attainments. Had Mr. Bird been Berzelius, which he is not, he would have been esteemed ill-mannered — being Mr. Bird, he appears in a still more unfavourable light. And after all, what is the pother about? Dr. Marcet and Dr. Prout conjectured "that the cystine diathesis *generally* exists to the exclusion of other diatheses; and that this diathesis does not *seem readily* to change into any other." Nothing could be more cautious, or more philosophical than such an observation. It is the expression of the facts that were known at the time of its enunciation, and its modesty and good sense contrast strongly and pleasingly with the dogmatic contradiction of Mr. Bird—a contradiction founded on the arrangement of *one* calculus. That exception, or several others to boot, would not really contravene the original position of the "two chemists." We take notice of this, because Mr. Bird is a gentleman of much industry and ingenuity, and it were a pity to see them marred by bad manners or bad taste.

Remarkable Malposition of the Stomach, which lay in the Thorax.

There have been at various times, cases reported, of hernia of the stomach into the chest, either through a congenital, or an accidental, or morbid opening in the diaphragm. Such cases are fortunately matters more of curiosity, than of much practical importance, yet they occur sufficiently often to render ignorance of their possibility inexcusable. We shall, therefore, present the following case.

Case. Sarah Charington, aged 19, was very delicate from her childhood. At three months of age she had a severe attack, which was attended with sudden shortness of breathing, and was considered an inflammation of the chest. When nine months old she had vomiting to an alarming extent; and when four years of age, suffered a most severe attack of the same kind, accompanied by purging; and the medical man who then saw her pointed out the peculiar conformation of the chest, and the little chance that the child would reach to years of maturity.—Before the age of five she had passed through the measles and the hooping-cough pretty favourably, and at eight years had a severe attack of fever. During her childhood she was always unable to play with other children, or to bear with any rough treatment; and, on several occasions, was expected to die from sudden dyspnœa. Her stomach was always liable to be deranged by the slightest cause; and she never had a figured motion till fourteen years of age. About that time, however, her bowels became costive; and in that state they ever after continued. She grew fatter and stronger, and had some colour in her cheeks: nevertheless, she enjoyed no good health. Her appetite was capricious; she could scarcely walk upright; and if she lay on her left side, it produced great uneasiness, and frequent vomiting: she was most easy when lying on her back, with her shoulders raised, and her knees bent towards her body, or sitting doubled on a chair: she had frequent palpitation, which she used to compare to the fluttering of a bird in her chest. The catamenia appeared once, at the age of seventeen; and only twice afterwards, at very long intervals; there was frequently a slight leucorrhœal discharge.

She referred the sensations of nausea to the left side of the chest and sternum, where there was a frequent gurgling noise. Kneeling was an easy position to her—exertion of any kind was next to impracticable. Her state, however, varied a good deal.

Towards the end of April 1835, she was seized in the street with violent sickness, vomiting a large quantity of brown matter; and after that time she was more subject to vomiting than before. She lost flesh, and became

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obviously more out of health. She was sent down to Ipswich in July, to be put under the care of Mr. Sampson, from whose advice she had formerly derived much advantage. She returned to town decidedly improved; but soon becoming worse, was admitted into Guy's Hospital, under the care of Dr. Bright, on the 14th of October, 1835. She was then emaciated, constantly vomited her food, and could not lie on the left side, because it brought the vomiting on. The pulsation of the heart was quite distinct upon the right side, but could scarcely be perceived upon the left. She said that this had always been the case. On the 7th of November, she was so much relieved that she went out, three days after which she took a long walk, when the vomiting returned, with obstinate costiveness, and pain in the back. She died on the 13th of February, 1836.

Dissection. The body was considerably emaciated, and the left side of the thorax had decidedly fallen in: the form of the chest was likewise remarkable, from its great length, the ribs reaching within a short distance of the crest of the ilium. On removing the sternum, the heart was seen lying in its pericardium almost on the right side of the chest, being considerably beyond the middle line; and on its left lay a tumor of a red or fleshy colour, somewhat vascular, slightly lobulated, and elastic to the feel. This tumor rose to the fourth rib; and a small portion of the lung appeared overlapping it from above. On the right side, a thin flap of the lung descended to the seventh rib, lying upon another tumor not unlike that on the left cavity of the chest. In the abdomen, the liver occupied a considerable space, extending a little more to the left side; the stomach was no where to be found; while the arch of the colon was seen passing across the abdomen, just below the liver; and an elastic tumor arose from under the acute edge of its right lobe.

On further examination, it appeared that the two bodies which encroached on the right and left cavities of the thorax were formed by the stomach contained in a membranous bag, over parts of which a scanty distribution of muscular fibres could be traced; when this bag was cut open, the stomach, covered with the omentum containing the usual deposit of fatty matter in its meshes, came into view. The œsophagus was now traced; which commencing in its natural way, terminated in the cardiac portion of the stomach, on a level with the body of the fourth dorsal vertebra.

The stomach, after filling all the lower part of the left cavity of the chest, passed behind the apex of the heart, where it was somewhat contracted; and again expanding, filled in the same way the lower portion of the right cavity, but to a less extent: the canal then passed through the diaphragm, in a situation nearly corresponding with the passage of the cava; and the duodenum running in a straight line downwards, behind the liver, was involved in a fold of peritoneum, where it was connected with the head of the pancreas, and accompanied by the cystic, hepatic, and common bile-ducts: the intestine then dipped behind the mesentery and mesocolon, and pursued very nearly their natural course.

The cyst which enveloped the stomach was a membranous muscular covering, not in any part adherent to the stomach; and appeared to be formed by a congenital splitting of the diaphragm; for on both sides we could distinctly trace bundles of muscular fibres coming off from the part where the diaphragm arises, and passing above the stomach towards the mediastinum; where they became so attenuated, and the cyst so membranous and mingled with cellular membrane, that all traces of muscular structure were lost. On the left side, there seemed to be even a third division of the diaphragm, in which was observed no muscular structure—going to envelop the spleen, and surrounding it by a membranous bag, out of which it could be turned, like the heart from the pericardium. The spleen was small, hard, and fleshy. The pancreas held its usual relation to the spleen.

The stomach was very large; and the fluid it contained nearly filled a wash-hand basin. Its internal surface was

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throughout of a dusky red, and its texture generally thickened; but in the part corresponding to the small curvature were found two or three deep chronic ulcers, with raised edges of almost cartilaginous hardness, one of which would have contained a small walnut in its cavity. The pylorus was very large and open, and seems to have been situated just above the diaphragm. The duodenum was greatly dilated at its origin, and partook of the appearance of the stomach.

The elastic tumor observed below the margin of the liver on the right side, proved to be the pelvis of the kidney, distended to the size of a tea-cup with clear urine; the kidney itself being much diminished by absorption.

Statistics of Hospitals.

The following facts relating to medical statistics are taken from the British Medical Almanack, a notice of which has appeared in the commencement of the present Periscope. There are several subjects embraced in these generalizations, and we shall notice them as briefly as possible in succession.

1. *Do Examinations after Death diminish the number of Applicants for Admission into Hospitals?*

Most certainly they do not. The alarmists would fain terrify us with prognostications of loss of hospital patients, from the prevalence of dissections, or from the operation of the Anatomy Act. Benevolent and timid people are very apt to overrate the sensibilities of the poorer classes. No doubt their ignorance makes them liable to prejudice. But even prejudice yields to the operation of necessity, and the sense of interest. The poor may at first raise a clamour against dissection; but when their lives are at stake, when present comfort and medical attendance, with the possibility of future dissection, are balanced against distress and no medical relief, the decision is pretty surely in favour of the former. A small knowledge of human nature would lead us to anticipate this result. Experience, both on the Continent and in this country, has proved it. Indeed, the framers of our Anatomy Act might safely have taken a bolder step than they did, and the working of the bill would probably have been better than it actually is. Political considerations interfered, and still interfere, with the insertion of compulsory clauses in that Act. We say that experience has decided that the knowledge on the part of the poor, that examinations after death are the rule of a hospital, does not diminish the number of applicants for admission into that institution. Perhaps there is no hospital, in London or out of it, where examinations after death are more constantly and more systematically pursued than they are in St. George's Hospital. Yet the number of applicants far exceeds the capability of accommodation for them, although that hospital contains upwards of three hundred beds. In other hospitals the case is just the same.

"At an hospital in an agricultural district, the house surgeon for the time was allowed to examine every body—in six months 18 or twenty bodies were carefully inspected, without asking permission from the friends; this had not been the custom before, yet the average number of in-patients increased that year to 100, the admissions to 1112; the average number of in-patients the year before had been 76, the total admissions 837. The connexion of a theatre for dissection with hospitals necessarily excited more prejudice formerly, than the simple inspection of the body excites now; yet experience proved that this had no influence whatever in diminishing the number of applications for admission. Cheselden commenced courses of anatomy at St. Thomas's in 1711; in 1706 it contained 362 patients, in 1717 the number had increased to 420. For other reasons it is not desirable that theatres for dissection should be immediately connected with hospitals; but this circumstance has not at all been found to diminish the number of patients at St. Thomas's, Guy's, St. Bartholomew's, the London,

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or any other institution. The number of applicants for relief at an hospital depends on the *kind manner* and *reputed skill* of the officers; the poor have sagacity enough to discover that the person most zealous in investigating their diseases is best qualified to relieve their sufferings."

We may set it down as a certain fact, that neither systematic examinations after death, nor the connexion of a school of anatomy with any hospital, will in any degree curtail the amount of its patients.

A. *Numbers of Patients and of Deaths in the Hospitals of Great Britain.*

"Besides 182,847 seen at the dispensaries and as out-patients, more than 24,000 patients are treated, and 2,100 die within the walls of the London hospitals. According to the last printed reports, 30,000 are admitted, and 1780 die in the country hospitals; in the Scotch infirmaries about 6,900 are treated, and 670 die; in Ireland, it appears from official returns and Mr. Phelan's work, that 8126 are treated in the county infirmaries, 6855 in the hospitals of Dublin, and nearly 15,000 fever patients in the establishments destined for their reception. The cases of disease placed every year, in the public institutions of the country, under the observation of the medical officers, amount, therefore, to at least 90,000, 6,300 of which terminate fatally, and may be submitted to necroscopical investigation. At a moderate estimation, the dispensary and out-patients are four times as numerous. The sums expended in supporting the medical charities of the country are enormous: the value of the labour devoted in them to the treatment of the classes unable or able to pay for medical advice, can scarcely be calculated."

B. *Advantages of due Statistical Returns from Hospitals.*

It is unnecessary to dwell on the advantages that would accrue from accurate and well-digested statistical hospital reports. It is only by the combination of particular facts and of general results that much good can be done to medicine. The time has arrived when a general and a well-arranged system of hospital reporting must begin to attract serious attention. There are some suggestions in the work before us, which we will lay before our readers, and particularly before the medical officers of hospitals.

c. Dr. Clifton, who published a work intituled the State of Physic, in 1732, proposed the following plan.

"In order, therefore, to procure this valuable collection, I humbly propose, first of all, that three or four persons should be employed in the hospitals (and that without anyways interfering with the gentlemen now concerned) to set down the cases of the patients there from day to day, *candidly* and *judiciously*, without any regard to private opinions or public systems, and at the year's end publish these facts just as they are, leaving every one to make the best use he can for himself. Would not some such method as this let us more into the nature of diseases in a few years than all the books of theories, or even the books of observations, hitherto published? Certainly it would: and yet if proper encouragement were given, it is not at all unlikely, but that persons enow would soon be found, every way qualified for such an undertaking. And even if good salaries were allowed them, and every thing made as easy and agreeable to them as they could desire, the benefit the public would receive from them would vastly more than balance the expense."

There is an objection to the publication of reports from a hospital in a separate form. Such a form of publication is attended with much trouble and some expense, and, after all, as it costs money, will not be very widely circulated. The best mode of rendering the facts that occur in hospitals generally available and useful to the profession, would be their regular and periodical publication in the Journals. We would suggest the combination of reports at short and at long intervals—in a weekly and in a quarterly journal. We should have no objection to open our pages to

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a well-conducted system of hospital-reporting. Sooner or later, some plan of the sort must be adopted.

The object, however, at the present moment is to agree on what is the best plan of *statistical* reporting. This is not so obvious as at first sight it might appear, and the Editor of the Almanack makes some observations, which are well worthy of attention.

"The first step in medical statistics, after having determined the mortality, is to ascertain the number of attacks of sickness, at different ages, to which a population is liable, and the numbers constantly ill. Hospitals throw no direct light on these questions, or on the absolute mortality and duration of cases. But hospital statistics may show the mortality and expected duration of different diseases at several stages of their progress, and the extent to which their mortality and duration are diminished by remedial means. To make the series of observations perfect, the cases should be traced from their origin to the termination; but patients only enter the hospital at a certain period of their complaint, on the 10th, the 20th, or the 30th day, &c.; and before this time, out of 1000 attacked, 500 perhaps have either recovered or died: you then can only have to deal at the hospitals with the remaining 500, whose history you may retrace, and then follow for a mean term of thirty, forty, or sixty days; when a certain number still remain ill, but the majority are discharged cured, relieved, or dead. Because hospital cases only come under notice after a certain time has elapsed, and are not all followed to the end, it has been thought they afford little instruction. We have reason to entertain a different opinion: at the same time, let it be constantly borne in mind that the mortality is merely the mortality for certain periods of disease: from the twentieth to the fifty-sixth day, for instance—it is not the entire mortality of the class of cases. To represent this, all the deaths that occur after leaving the institutions, should be added; thus augmenting the mortality, which is however lowered, on the other hand, by another powerful cause. Admit that 1000 labourers are attacked by disease; all repair to the infirmaries, who remain ill, on an average, twenty days; but before that time, 280 have recovered, and twenty died: in the institutions 700 remain under treatment till the fifteenth day, and during this period fifty die, and 450 recover; 200 leave uncured, and of these, ten die. The mortality of the cases would be 8 per cent.; the mortality of the cases, while in the institution, was fifty in 700, or 7 per cent. It may happen that the mortality in the two instances coincides by a sort of mutual compensation between the excess of previous recoveries and the subsequent deaths. Nearly the same reasoning applies to the duration of cases."

It cannot be expected that the deaths which occur after dismissal from the institutions can be reported on. The day of the disease on admission—the occurrences whilst in hospital—and the day of discharge or of death, will probably constitute the main statistical facts that we can obtain.

D. It would be advantageous if the annual reports from all hospitals referred to the same period—from the 1st of January to the 31st of December. As it is, the reports of some hospitals start from Lady-day, or Midsummer, and thus accurate comparison with other hospitals is interfered with.

2. "*The number treated yearly is the mean of the numbers admitted and discharged.*" The total number of in-patients in the year is generally published in this manner:—

In-patients admitted from Jan. 1st, 1833, to Jan. 1st, 1834.

Remaining Jan. 1st, 1833....	46
Admitted since.....	342
Total ..	388
Discharged cured.....	200
Relieved, &c. &c. &c.	142
Remaining Jan. 1st, 1834	46
Total..	388

In some reports it seems to be implied that 388 patients have actually been treated in the year. This is an error: you have already counted the forty-six

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once in the Report of 1832; and of the 342 admitted, you will in the same way count forty-six a *second* time in the year 1834. The forty-six patients in the house at the beginning of the year have, on an average, remained half their time—for instance, twenty days;—they will probably still remain twenty days; they may therefore be regarded as half-treated, the same as half the number fully treated; add, then, 23 to 342, and you obtain 365; but 46 remain at the end of the year only half-treated; and you have already counted them for fully treated among the 342; as a correction, therefore, deduct 23 from 365, and the original number 342 remains. 342 patients have been admitted, and 342 have been discharged in the year: this is therefore, the number annually treated. The number treated may be deduced from the number admitted and remaining, or from the number discharged and remaining: and generally, when several years are taken together, and the size of the hospital remains the same, the number discharged or admitted, exclusive of the number remaining, represents the number treated with sufficient accuracy."

3. *Exaggerations of Numbers of Patients.*

Hospital annalists are as anxious to multiply the number of their patients, as doctors are in private practice. Thus at some hospitals, a patient is re-counted whenever he changes his condition from that of out-patient to that of in-patient, or the contrary—or he is obliged to take out a fresh ticket every two months, and is reckoned as a fresh patient, "an ingenious zootomical device," and well calculated to knock statistics on the head. All this is, in a scientific point of view, reprehensible.

4. Patients are reported as "cured, relieved, uncured, or dead." The term cured should be employed in an uniform and rigorous sense. It is suggested that another head should be generally added—"discharged for non-attendance," a discharge which should take place, if nothing is heard of the patient for a fortnight. These non-attending patients are very convenient to reporters, and serve for cured in a wholesale way.

5. "*The annual mean number of in-patients under treatment may be determined by counting the patients every day in the year at the same hour—for instance, twelve to one o'clock—and dividing the sum by* 365: the average number of dietaries, or of persons *sleeping* in the house, would furnish the same results. When patients are admitted and discharged on a particular day, the patients discharged should be counted, if the admission and discharge take place after dinner; the patients admitted, if before: both should never be reckoned. Approximation to the average number treated may be obtained, by adding together the number in the house on a fixed day of every week or month, and dividing the sum by fifty-two or twelve. The average number of patients under treatment is exaggerated by counting the *beds* actual, or possible; by selecting the greatest number ever in the house; or by taking one day in the week, and counting, in addition to the patients then resident, all who *have been* in the house during the six preceding days. When the absentees are duly erased from the books, the average number of out-patients can be calculated in the same manner as the in-patients; the mean number that *attend* should also be ascertained. *None of the hospitals in the metropolis*, except the *London Hospital*, publish the average number of patients under treatment: but this essential statistical element is published by the Cambridge, Winchester, York, Gloucester, Exeter, Nottingham, Salisbury, Salop, Chester, Canterbury, Bedford, and Colchester Infirmaries. It is the main feature of a report, and alone controls the expenditure. It is either suppressed from imperfect knowledge or inattention; to allow the extent of the institution to be exaggerated; or to prevent the inconveniences of a check on the financial operations of the persons who distribute the funds."

The editor proceeds to detail the results deducible from the present Reports:

6. "Dividing the total deaths by the

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number treated, (2) exhibits the mortality of the cases. Example: Canterbury Infirmary, 1826-35, in-patients treated, 4254; died, 198; and 198 divided by 4254 is .0465, or 4.65 per cent.

7. Dividing the yearly deaths by the average number under treatment gives the annual rate of mortality; dividing the result by 10 presents the rate of mortality in 36.5 days. Thus the deaths out of a given number, in a given time, can be compared at different Institutions; the mortality of the sick may be compared with that of the total population; and, moreover, 36.5 days is an approximation to the mean duration of severe cases. Example: Canterbury Infirmary, 1826-35, the average number of patients under treatment was 54.6, the annual deaths 19.8; and 19.8 divided by 54.6 gives, for the annual rate of mortality, .363, or 36.3 per cent. and a mortality, in 36.5 days, of 3.63 per cent.

8. The average number under treatment (5) multiplied by 365¼, and divided by the total number treated, (2) presents the mean term of treatment in days. Example: The Canterbury observations as above. The average number under treatment, 54.6, multiplied by 365¼, is equal to 199,426 days of treatment, which divided by 4254, the number treated, shows that the mean term of treatment was 47 days.

In the present hospital-books, the age, sex, residence, and occupation are generally entered. The remarkable results presented by the mortality of attacks at different ages have been pointed out in other parts of this Almanack. The sexes and occupations, as well as the ages, of the patients admitted, cured, and dying, should be inserted in the reports.

From the numbers *admitted* at each age,—for instance, 20—30, and 40—50, and enumerations of the numbers *under treatment* at the same intervals of age, it may be ascertained to what extent the term of treatment varies with the age of the patients. If for 100 treated in the year, between the ages 20—30, ten remained constantly under treatment, and for 100 admitted between the ages 40—50 fifteen remained on an average, it would follow that the patients aged 20—30 remained 36½ days, the patients aged 40—50 half as long again, or 54¾ days. The ages of the patients admitted in quinquennial periods of life should therefore be published; and, in addition to this, the mean number at the same ages constantly under treatment deduced from twelve annual enumerations made on the first day of every month."

From a review of the preceding observations it is obvious that the principal addition to reports of cases recommended by the Editor, is the stating with accuracy the duration of the disease—the number of days that the patient has been ill before admission—the number of days that he continues under treatment. Accuracy is above all things to be desired—and next to accuracy comes method. It is clear that the time is arriving when the medical officers of hospitals will find their best interest, in rendering the facts which occur in those institutions as extensively useful as possible to the profession. System will enable them to offer those facts in the best form at the least trouble. It is on this account that we have made the preceding extracts from the useful little work which lies before us. Our readers know how much we have advocated the publication of statistical results—how unceasingly we have encouraged the study and the diffusion of facts both in the form of particulars and of generalizations. We would fain hope that our endeavours "to guide and to improve the public taste" have not been altogether useless; and that our influence, temperate and rational in its objects and its character, is more permanent and more beneficial than that of mere political brawlers.

Aberdeen Lunatic Asylum.

Dr. Macrobin, the zealous physician to this establishment, has published a brief report of the cases admitted and treated, between the 1st of May, 1835, and the 1st of May, 1836. There are in it some facts of a statistical character, which

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are adapted for the perusal of our readers. The following are the numerical statements of the patients admitted, treated, cured, or dead in the period above-mentioned.

Number of Patients in the Asylum, 1st May, 1835 (date of last Report)..		120
,, Admitted between 1st May, 1835, and 1st May, 1836		37
		157
Whereof were considered curable (of former number)	23	
Do. (of the latter number)	26	
Total number of supposed curable cases during the year.....	49	

RESULTS.

Dismissed between 1st May, 1835, and 1st May, 1836, recovered,				20
Do.	,,	do.	convalescent, or much improved,	4
Do.	,,	do.	somewhat improved.....	5
Do.	,,	do.	by desire of friends, unimproved,	2
Do.	,,	do.	of incurable and inoffensive, or otherwise improper Patients	8
Dead	,,	do.	(of recent cases)	4
Do.	,,	do.	(of old and confirmed cases) ..	7
Total number dismissed during the year				50
Total number remaining in the Asylum, 1st May, 1836				107

The total number of cases in which it was supposed that treatment might be serviceable, was forty-nine. Of these, it appears that twenty were dismissed quite recovered, four greatly improved, and five less improved.

"It thus appears that twenty-nine, out of the forty-nine curable Patients, have been more or less benefited by their residence in the Asylum, and already discharged; and that the number of cures is in the proportion of rather more than two-fifths of the number of those who have been placed under treatment, which is considerably above the average proportion of recoveries in most of the large public hospitals for the insane, as laid down in the statistical tables, drawn up by Esquirol, and others. And I may here also be permitted to observe, that a like proportion of recoveries has been obtained on an average of the last six years; for out of 279 Patients who have been subjected to the curative treatment of this institution, within the period just mentioned, 115 have been recovered, exclusive of thirty-three who have been dismissed, partially recovered."

It is obvious that the preceding calculation is open to a serious fallacy. More than two-fifths, says Dr. Macrobin, of those *considered* curable were cured. But what precise standard have we, to determine who are to be considered curable. At one institution, a case may be deemed quite hopeless—at another not so; and that would have the advantage in its reports, which abandoned most supinely the bad cases. The only fair mode of comparison, is that which sets the cases against the admissions. In that case, different institutions must admit all cases, curable or hopeless indiscriminately, for, if there is selection, the data for comparison are damaged or destroyed. The fact is, that in cases of insanity accurate comparisons of this sort between the results obtained at various institutions, are difficult, if not impossible.

"Of the four principal modifications or species of insanity, viz:—Mania, Monomania, Dementia or acquired fatuity, and congenital fatuity or Idiotism—the two first only are considered to be fit subjects for medical treatment; the two latter being generally believed

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to be hopeless, or nearly so. No less, however, than ten of these incurable individuals have been admitted during the year, and in some of these instances Palsy or Epilepsy was combined with the insanity. The cases of Mania wherein there is general disturbance of the intellectual functions, with violent excitement, are unquestionably by far the most favourable for cure; and it is surprising how soon a change for the better takes place in the condition of such persons, when removed from their friends, and put under an early and judicious course of treatment. In several instances of this kind, a most striking improvement has been observed within a week or two after admission; and this has even occasionally happened when, for some weeks previously, the complaint had been pursuing its course with much violence, and without intermission: although it must be confessed that, in other instances, where the treatment has been so long deferred, hopeless fatuity has been the consequence."

Dr. Macrobin dwells on these facts, in order to press on the attention of the friends of patients, and, we may add, on that of their medical attendants, the necessity of a well-timed removal from home. Dr. Macrobin also dwells on the advantages which have accrued from a well-regulated moral treatment—one calculated to engage the *attention*, and to encourage the *exercise* of the patients in the open air.

With reference to the causes which gave rise to insanity, in the different individuals who have been admitted during the year, we find that twelve of them were traced to hereditary predisposition; two to congenital imbecility; five to a highly scrofulous constitution of body; five to domestic afflictions—pecuniary embarrassments—grief, and other depressing passions; six to inebriety, and other demoralizing habits; two to an hysterical constitution, and previous attacks; two to an interruption of the uterine functions; one to injury of the head from a blow; one to child-birth; one to epilepsy; and one to a severe febrile attack; whilst two arose from occult causes, in other words from causes which could not be traced or had entirely escaped detection.

Notwithstanding, however, that such appear to have been the more prominent of the remote causes, there was unquestionably in a good many instances a combination of these in operation, all tending to the same end, some of them of a predisposing, and others of a more immediate or exciting nature. The causes of insanity are, indeed, often obscure; but in general, it will be found that several have been acting simultaneously towards its production, and also, that, in a majority of instances, there is an hereditary predisposition to it. Dr. Macrobin goes on to observe—

"That four of the female patients, who have within these last six years been discharged convalescent, have been re-admitted after the lapse of some months, or it may be one or more years, labouring under fresh attacks; but that these secondary attacks have been comparatively rare amongst the males. Females would seem, from their peculiar habits of life and situation in society, to be at all times more under the influences of the moral, than the physical causes of disease. And as it is very difficult, if not in most instances impossible, to withdraw an individual entirely from the operation of those of the former class, we are, I imagine, from this circumstance, enabled to account, in some measure at least, for the fact that they are more subject to relapses or recurrences of their complaint than males."

Eleven patients have died during the year; seven being aged and confirmed lunatics. In all the cases a post-mortem examination was instituted, and the appearances were carefully noted. Those appearances are thus generalized.

Lesions of the brain or its membranes, and sometimes of both together, were found in all of them; and although the morbid appearances in this region of the body were not in every instance precisely similar, yet were they substantially alike. Other organs of the body were also occasionally found in a state of disease. Thus five of the male patients died with symptoms of palsy and fatuity, and in all of them were

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discovered unequivocal traces of disease of the investing membranes of the brain, along with copious depositions of a serous fluid beneath the same, and into the ventricles. Another male patient who had long been subject to epilepsy, and who died of ileus, exhibited disease of the brain, as well as of the intestines. The last of the male patients who died, and who was in a state of fatuity when admitted, also exhibited traces of cerebral disease. The first female who died had been long subject to insanity: she exhibited marked disease of the cerebral membranes. The second was a young girl, who laboured under congenital idiotism, and whose mother has been long an inmate of the institution: she died of pulmonary consumption, and exhibited a tubercular formation in the right hemisphere of the brain; besides extensive tubercular disorganization of the lungs, peritoneum, spleen, and other abdominal viscera. The third person who died among the females had been for some time subject to violent paroxysms of mania: she also exhibited traces of cerebral disease, and two tumors were found in the cavity of the abdomen, besides intense injection of the inner coat of the stomach and bowels; the one tumor was attached to the stomach, and the other to the liver, and the irritation which they had excited in the organs with which they were in contact, appeared to have operated as the immediate cause of the maniacal paroxysms. The last was a young woman, who had been long subject to epilepsy, and was fatuous at the time of admission, and who died from exhaustion, consequent on the violent struggles which she had long sustained: the brain and its membranes were in this case much injected.

Dr. Macrobin goes on to observe:—

"In reference to this brief statement of the morbid appearances in the fatal cases, it is worthy of remark, that while five of the deaths amongst the males were preceded by a state of palsy, not one of the women exhibited this condition; and moreover, that the morbid appearances were precisely similar in all those five cases. This circumstance I have also noticed in the fatal cases of former years. I can recollect, indeed, only one instance of a female patient having exhibited symptoms of palsy during the last six years, whereas not less than a third of all the male patients who have died within the same period, had, previously to this event, fallen into the state referred to. It appears to me, that we ought to look to the differences in the nature and mode of operation of the exciting and predisposing causes, to which the two sexes respectively are most apt to be exposed, in order to obtain an explanation of this remarkable difference in the *termination* of insanity, in male and female lunatics. The males, for example, are more exposed to powerful causes of a *physical* kind, especially the abuse of spirituous liquors, tending greatly to the production of *inflammation* of the brain, and its consequences:—palsy being, together with derangement of the mental faculties, one of these consequences: while, on the other hand, the females are exposed to those *moral* causes which rather beget a state of *nervous irritation*, than of inflammation."

Those patients who are in a composed state of mind, and who are not influenced by delusions likely to be aggravated by religious exercises, are permitted to join in public worship. This moderates their passions, and is productive of very good effects.

Such is the report before us. We think it might usefully assume more of a precise and medical character. If it is not found adviseable to associate in the same report, statements adapted for the managers of the asylum and for the medical profession, Dr. Macrobin would confer a benefit upon the latter, by publishing a statistical report for it in a separate form. Some medical journal would be a good medium for it. Dr. Macrobin is evidently zealous enough to spare no pains in rendering the facts he witnesses serviceable to those who do not enjoy the same opportunities.

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Medical Statistics of the Army.*

Lieut. Tulloch, of the 45th Regiment, who is at present officially employed on the statistics of the army, has published in the United Service Journal some calculations on the mortality of officers in the army, which are interesting not only to the corps, but to all of us.

The first table which we shall present, exhibits the mortality of officers of the British army at home and abroad.

TABLE I.—P. 182.

1. FULL PAY.	AT HOME AND ABROAD.					
British Infantry of the Line.	Number of Officers among whom the mortality occurred.	Period over which the Calculation extended.	Total Deaths in Nine Years.	Proportion died in One Year.	Annual Mortality per cent.
RANKS.					
Lieut. Colonels....	122	1826—1835	31	3.444	2.8
Majors	206	Ditto	34	3.777	2.833
Captains	1040	Ditto	187	20.777	2.
Lieutenants	1494	Ditto	316	35.111	2.35
Ensigns	889	Ditto	90	10.	1.125
Total....	3752		658	73.111	1.949

The average annual mortality is nearly *two* per cent. throughout the whole infantry serving at home and abroad.

It may at first appear singular that the mortality should be so great among the lieutenants, who are comparatively young. The reason is a simple one—they are particularly exposed to the dangers of foreign service.

"The deaths among the lieutenants being greater than among the captains arises from the larger proportion of the former rank serving in the East Indies, where regiments have a double complement of Lieutenants. The reason of the mortality among the Majors being less than among the Captains is somewhat similar; as there is only one Major abroad with the service companies out of two, while there are six Captains out of ten. Many of the Majors are also young men, having attained that rank rapidly by purchase.

The mortality among that portion of our officers who never serve abroad, viz. the Household Troops, Heavy Cavalry, and a large proportion of the Light Dragoons, is very low. Out of an annual strength of 711, there have only died 53 in nine years, or 5·9 per annum; being in the ratio of little more than 0·8 per cent.

The mortality among the Artillery and Engineer officers who do not serve in the East Indies, and have not so large a portion of foreign service and bad stations as the Infantry, has been as follows:—

Artillery.—Average strength, 430—Died in nine years, 55—annually, 6$\frac{1}{9}$—Ratio per cent. 1$\frac{4}{10}$.

Engineers.—Average strength, 221—Died in nine years, 24—annually, 2$\frac{4}{9}$—Ratio per cent. 1$\frac{2}{10}$."

The ratio of mortality among officers on the half-pay list, according to their ranks, for the same period of nine years, is exhibited in the next table.

* British Med. Almanack, for 1837.

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TABLE II.

	Total Number unemployed.	Total Deaths in Nine Years.	Deaths Annually.	Rates per cent. Annually
Majors	465	89	9.88	2¼
Lieut. Colonels	535	118	13.11	2¾
Colonels.....	266	44	4.88	*1¼
Major Generals....	224	58	6.44	2⅝
Lieut. Generals....	215	89	9.88	4⅝
Generals	96	55	6.11	6¼

* The mortality among the Colonels has been lower than among the junior grades, as there are many of them comparatively young men, having got on rapidly in the first ranks of their profession during the war: many of them too, were mere boys when they entered—a practice lately put a stop to.

The last table we shall admit is one which exhibits the mortality of officers in our different colonies, for the period of nine years already selected. During that period there has been comparatively little sickness in our West Indian possessions. The officers of the European corps have now considerable facilities in returning home, when in bad health, to do duty with the depôts of their corps—a circumstance which must materially tend to diminish their mortality. But the colonial corps, having no depôt companies in this country, and being generally at the worst stations, are, of course, less favourably situated, and the deaths among them are proportionally great.

TABLE III.

STATION.	DESCRIPTION OF FORCE.	Ratio per Cent. of Deaths annually among the Officers at each Station.
Bengal	Infantry.....	4·7
	Cavalry	2·1
Madras.....	Infantry.....	5·3
	Cavalry	3·4
Bombay	Infantry.....	3·
	Cavalry	1·8
Ceylon	Infantry of the Line..	1·4
	Colonial Regiments ..	3·7
	Average of all Officers ..	2·6
Mauritius ..	Infantry	1·0
Windward & Leeward Islands,	Infantry of Line	2·2
	Colonial Corps	7·1
	Average of all Officers ..	3·8
Jamaica	Infantry.....	3·9
New S. Wales	Infantry.....	1·2
C. of Good Hope	Infantry.....	1·5
N. America & Bermuda	Infantry.....	·8
Gibraltar	Infantry.....	1·2
Malta.....	Infantry.....	·9
Ionian Islands	Infantry.....	1·2
Sierra Leone	Colonial Corps	13·
Great Brit. & Ireland	.....	1·1

NORTH LONDON HOSPITAL.

RECENT OPERATIONS OF REMOVING THE SUPERIOR MAXILLARY BONE.

Our readers are aware that the superior maxillary bone has of late years been excised by many surgeons, for morbid growths originating in it. Our readers are aware also that modern experience of the effects of operations for malignant tumors and changes of structure, has tended to bring the knife into discredit, and to discountenance those fre-

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quent and bloody exhibitions which were formerly witnessed in our hospitals. It may safely be said that for ten operations for malignant growths performed twenty years ago in the hospitals, there is not more than one attempted now. A proof of two things—the ill-success of such operations in general, and the information and humanity of surgeons. The day indeed for flashy operations is gone by. The refinement of our manners is disgusted at the exhibition of what wears more the aspect of clever butchery than of science—and the amount of our experience both tells us how to prevent and when to avoid operations. Formerly the report of the performance of an operation peculiarly severe, would have excited astonishment, attracted admiration, and contributed greatly to the reputation of its performer. Now the question is instantly asked—"can that have been required—is it warrantable and judicious?"—and until that question has been satisfactorily answered, the impression is against and not for the operator. A feeling of this description has lately been excited by two reports of cases lately published in the Lancet.*

The first case was that of a young woman, 20 years of age, admitted into the North London Hospital on the 27th of September, under the care of Mr. Liston.

"Eight years since she perceived a small hard tumour projecting from the gum of the superior maxillary bone, above the second incisor tooth. It was not painful, nor did it inconvenience her. The tumour increased in size, slowly, for two months, when a medical man extracted the incisor tooth below it, which was sound. Soon after this the next tooth loosened and fell out, without being in the least decayed.—The tumour increased in size, notwithstanding the extraction of the tooth, and three years and a half since it had attained the size of a hen's egg. It was not accompanied with pain. At this time she was admitted into the *Hereford Infirmary*. In the interval, however, a surgeon had attempted to pass a lancet into the tumour, but did not succeed, on account of its hardness. While in the infirmary the tumour was partially removed, with a portion of the alveolar processes, by means of a saw and forceps. After removal it was found to present a fibrous appearance, and was very slightly ulcerated on the surface next to the lips. She continued in the infirmary for eight months, and was discharged with the wound very nearly healed, but directly afterwards the tumour began to grow again, more rapidly, and with pain."

The state of the patient on admission, was as follows:—"At present a large tumour occupies a great part of the cavity of the mouth, and projects forwards from beneath the upper lip, which is completely hidden by it. The above sketch accurately represents its external encroachments. The nose is carried upwards and to the right side by it, so that the nostrils are closed. One part of the tumour presents an ulcerated surface, covered by a thick secretion, here and there, while the other parts look red. The ulcerated surface measures, from side to side, in a line parallel to a line drawn from angle to angle of the mouth, 6½ inches, measured over the tumour. From the angle of the eye, to which the tumour extends, to a line intersecting the above, 4¼ inches. The left side of the face is much distended by the part of the tumour within the mouth, measuring, from the angle of the mouth to a line let fall perpendicularly from the ear, 5 inches. The right side of the face is less distended. Near each angle of the mouth the margin of the upper lip is stretched over the tumour, and on drawing the tumour down its continuity is rendered distinct. Within the mouth it extends on the right side, beyond the teeth, which are only seen when the tumour is drawn down by a spatula. On the left side its extent is much greater, distending considerably the integuments of the face. A groove, corresponding with the line of teeth, is observed, at the back part of which the

* Nos. for Nov. 5, 1836—and for November 26, 1836.

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two last molar teeth are visible. The others cannot be seen when the tumour is drawn down. In the median line it extends from the part projecting from the mouth backwards, beyond the soft palate. None of the front teeth can be seen. The colour of the tumour within the mouth is a dusky red, covered by abundant mucous secretion. The part corresponding with the palate is rather redder than the other parts. A spatula can be passed between the tumour and hard palate, on the right side. This cannot be done on the left. The integument of the face on each side is free from the tumour."

The general health of the patient was not bad. She was not aware of any cause for the complaint.

Mr. Liston decided that the disease was not malignant, because it was of long growth, of firm structure, and did not bleed except at the menstrual periods. He said "it was *certainly* not malignant," and "undertook the operation entirely on his own responsibility." That operation was thus performed.

"Mr. Liston commenced the operation by extracting the first sup. molar tooth of the right side. Then, with a stout bistoury, he made an incision from a little external to the outer angle of the left eye, in a line over the zygomatic arch, to nearly its whole extent. The second incision extended from the articulation of the frontal bone, with the ascending process of the malar bone, downwards, in a curved direction, and, guided by two fingers, passed betwixt the cheek and the tumour (the convexity of the curve being backwards) to the right commissure of the mouth. The first incision fell upon this incision, near its commencement, and at a right angle with it. The next incision extended from the left ala of the nose, in a vertical direction, through the superior lip, detaching the ala from its attachments. A similar incision was then made on the opposite side. The flaps so formed were dissected up, and fixed by an assistant, so that a large surface of the tumour was exposed. The zygomatic arch and the malar bone, near its articulation with the sphenoid and frontal, were, in succession, divided with Mr. Liston's cutting forceps. (The patient now complained of faintness, and some wine was given to her.) The nasal process of the superior maxillary bone was next divided; then the forceps were introduced so as to divide the alveolar border of the right superior maxillary bone, at the point from which the tooth had been extracted, together with the corresponding portion of the hard palate.

After the bones had been thus divided, Mr. Liston observed, that now all the difficulties were overcome, and that he had merely to turn the mass out of the cavity in which it was embedded. The patient having been refreshed by a little wine, having cleared her throat from blood, and having collected herself, the tumour was depressed gently, by the fingers resting on the lower margin of the orbit. The adhesions of the masseter, and the reflection of the membrane of the mouth on the upper lip were divided, and the diseased mass was lifted away.

The cavity of the mouth was then examined, and the soft palate found entire. Dossils of lint, moistened with water, were placed in the cavity. The flaps were retained *in situ* by a few points of twisted suture, great care being taken to adjust the margin of the lip neatly. Lint moistened with cold water was then applied over the face, and the patient conveyed to bed. During the operation, three small vessels bled smartly, but were soon checked by the finger of an assistant. No vessel required ligature."

We need not add the subsequent diurnal reports, as nothing of an untoward nature occurred. The last report is dated on the second of November, twelve days after the operation, and the patient was then walking about, had a good appetite, and her face was assuming quite a natural appearance.

On this case the Lancet offered the following observations:—

"In the report of the formidable operation which was recently executed by Mr. Liston in the *University Hospital*, for the removal of an enormous tumour of the mouth, and the bone to

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which it was attached, we have to record one of the most splendid triumphs which operative surgery has ever achieved. Nor was the profoundly scientific and masterly mode of accomplishing the operation the most prominent trait which the ability of the surgeon presented. The sagacity displayed by the pathologist in forming a correct diagnosis belonged, possibly, to a higher class of merit than did even the tact and dexterity which were evinced by the operator in the theatre. Eighteen months since, when the tumour was comparatively small, and the roots of its growth could be accurately traced, the sufferer was discharged, not only as incurable, but as an unrelievable object of affliction, by the surgeons of *Guy's Hospital*. The opinion of Sir Astley Cooper, the 'consulting-surgeon' of that institution, was not once solicited on the case of the unfortunate patient, so utterly destitute of hope was the miserable condition of the woman in the estimation of the surgeons of *Guy's Hospital*. Eighteen months since, she left that once-renowned institution, with a mind phrenzied by agony and despair, whereas she is now about to be restored to her friends, relieved from a mass of diseased growth, which, whilst it rendered her an object of hideous and unsightly deformity, hourly threatened her with death, in two of his most terrific forms —starvation and suffocation."

One or two observations naturally occur to the mind of the candid and well informed surgeon, on perusing this case and its attendant comments.

1. He is first tempted to inquire—are there really any means of forming such a positive opinion with respect to the malignancy or non-malignancy of a morbid growth, as Mr. Liston is said to have uttered, and seems to have acted on? If the circumstances on which he leans—slowness of growth, firmness of structure, and indisposition to fungate or to furnish serious hæmorrhage, be considered decisive evidence of non-malignancy, then there are few hospital surgeons, whose senses have not most strangely deceived them. In fact, it is well known that slow growth and a fibrous structure in a tumor are no guarantee against its cancerous nature. We may mention two cases which occur to our mind at this instant.

a. A boy had a fibrous tumor, which sprung from the condyloid end of the femur. It had been long in growing, and the case was thought very favourable for an operation. The thigh was amputated considerably above the tumor. That patient recovered from the operation, and died about a year afterwards with *medullary tubercles* in the lungs.

b. A man had a small, solid, fibrous tumor in the right side of the lower maxillary bone, near its angle. It grew from the alveolar process. The right half of the jaw was removed, much beyond the precincts of the disease. The operation did well, the wound healed, but many months afterwards, the patient returned with a large tumor of *medullary* character in the face, and symptoms of disease probably of a similar description in the lungs.

We merely mention these cases by the way. We might adduce, from published records, many like them. But it is unnecessary, because surgeons now admit that there is no precise line between malignant and non-malignant growths, which are convertible into each other, in a mode and to an extent that we are quite unable to determine. The characters alluded to by Mr. Liston are favourable it is true, but they are no more. Undoubtedly they do not carry with them the certainty that he expresses.

2. When we reflect on the capricious character of morbid growths, the readiness with which the wound made for their removal heals, and the variable period at which they re-appear, when they *do* re-appear—such excessive demonstrations of delight and confidence, as stare at us in the article in the Lancet, wear a premature and rather ridiculous aspect. The "extraordinary sagacity displayed in founding a correct diagnosis," remains yet to be proved. When two or three years have elapsed, it may be talked about. At present it

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is scored on trust. We may say to the reporter, as Hudibras did to Ralpho—

——— "That cuckoo's tone
Ralpho, thou always harp'st upon.
Festina lente, not too fast;
For haste (the proverb says) makes waste.
Whats'ever will not with (thy what-d'ye-call)
Thy light jump right, thou call'st synodical."

It was under these circumstances that a second case occurred, and appeared in the columns of the Lancet.

Case.—"W. B. aged 24, was admitted Nov. 17, under the care of Mr. Liston. Two years since he received a smart blow on the left side of the face, from a cricket-ball, which was followed by much swelling, pain and ecchymosis, all of which, however, soon disappeared. Ten months since, the last molar tooth loosened spontaneously, and was extracted, after which the gum became much swollen and tender; the swelling increased rapidly, and extended to the side of the face, and in a few weeks it attained to half of its present size. Subsequently the three teeth adjoining became loose, and were extracted. After the extraction of the second molar tooth, not many weeks ago, there was some hæmorrhage, but it was soon arrested by pressure. The growth of the tumour was rapid at first, but of late it has been less so. During its development there has not been much pain.

At present, a tumour of about the size of a very large orange, occupies the left side of the face, involving the superior maxilla. The integuments of that side are much stretched over the projecting tumour, and were of a red colour. The nose was pushed to the right side, and the lower eyelid was prevented from descending properly. Within the mouth the tumour extended backwards, in a line with the hard palate, and near to the mesial line, projecting downwards, much below the gum of the opposite side. The left nostril was completely filled, and the tumour at this part was particularly firm. The other parts of the tumour were moderately firm, and at some points elastic. All the places from which the teeth had been extracted are healed, except that from which the second molar was taken, which remains open, but is not ulcerated, nor does any fungus protrude from it. A probe can be passed a short way into the socket, but not into the tumour. The first molar tooth remains, but is loose; there is no tenderness, or pain, in the part at present.

Operation—Nov. 18. Previous to the patient being brought into the threatre, Mr. Liston said:—'The present operation is not one which I undertake from choice, but on account of the urgent solicitations of the patient. I do not think that the tumour is of the same benign character as the one which you lately saw removed: and although by no means so formidable-a-looking tumour, in fact, not being a sixth part of the size, yet I anticipate much greater difficulties in accomplishing its extirpation, both as regards its attachments and its vascular action; consequently, I cannot speak favourably of the ultimate result. There are, however, some points about this tumour which are not unpropitious—such as its having followed a mechanical injury—the absence of ulcerations or fungous protrusions in the situations from which the teeth have been extracted—the great firmness of the part within the nostrils, from which there has been no discharge—and our inability to pass a probe into the tumour. The removal of the growth, thus early, before malignant action is developed, or the surrounding parts become contaminated, gives the patient the only chance of its non-appearance.'

The patient, on being brought into the theatre, was seated in a chair, and his head was supported on the breast of an assistant. The operation was commenced by the abstraction of the first and second incisor teeth of the left side. The first incision was commenced over the malar prominence, the operator cutting down to the bone, and through the integuments into the mouth, continuing the incision, in a curved line, to the left commissure of the mouth, the convexity of the curve being backwards. The second incision extended along the

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side and alæ of the nose, to the median line of the lip. The flaps so formed were dissected up from the tumour, which was exposed, together with part of the malar bone. The malar bone was now cut through, near to the superior maxilla, with Hey's saw, and the ascending nasal process of the superior maxillary bone was divided with the cutting forceps. With the same instrument, a notch was cut out from the border of the superior maxillary bone, at the point from which the teeth were extracted; and the hard palate was divided along, near the mesial line, with a strong pair of scissars, to the palate bone; with the left hand, the tumour was depressed, and the remaining adhesions in the orbit were divided with the knife. The mass was then removed with great facility. The cavity having been sponged out, some of the morbid growth was found adhering to the ascending plate and cell of the palate bone, and slightly to the pterygoid process of the sphenoid bone. This was removed by cross-cutting forceps. The cavity was again sponged out, and, upon a careful examination, no more of the morbid growth was found remaining, or any vessel discovered bleeding. It was then filled with dry lint, and the flap brought down, and fixed by means of two twisted and interrupted sutures."

The patient was conveyed to bed after the operation, much exhausted, with rapid pulse, cold extremities, and occasional convulsions. He never rallied afterwards, and, at 11, p.m. of the day of the operation he expired, evidently from the effects of the operation.

"*The tumour* was an albuminous sarcoma, consisting of cartilage, with spiculæ of bone, and a glairy matter coagulable by heat. On examining the cavity, a clot of blood was found in it, upon the lint. The whole of the palate bone, and the root of the pterygoid process, were removed, leaving the internal and external pterygoid process with the soft palate. The sphenoidal cells were entire, the opening into which was easily seen, with a well-defined margin, covered with its proper lining membrane. A small portion of the ethmoid was removed. The cells of this bone, together with those of the sphenoid cells, were quite free from disease. No further *post-mortem* was allowed.

Since the death of the patient, it has been ascertained that he had led a most dissolute life, which, before the operation, he most strongly and repeatedly denied."

To this case, itself of no ordinary complexion, the most extraordinary comments are appended. Before we give them we will make a remark or two.

The reporter took occasion to laud Mr. Liston for his sagacity in the diagnosis of the preceding case. It was not simply that he operated wonderfully well, his sagacity in determining that the disease was not malignant, was more wonderful still. But, if the diagnosis in that instance was worth any thing, what shall we say to it in this? In that case, the surgeon operated because the disease was of slow growth, of firm texture, and did not bleed. In this case, he operates when the disease is of rapid growth, of unequal texture, and *does* bleed! If the decision was right in one instance, it is clearly wrong in the other, and the "sagacity" displayed is of a very contradictory character.

Two circumstances are urged in extenuation, for that appears to be thought necessary, of the operation. First, we are told that it was done at the solicitation of the patient. Supposing the operation to be improper, that is no excuse at all, but the most damnatory circumstance that could be adduced against the surgeon. *He* is the arbiter of the propriety of the operation—to *his* judgment the patient confides his life in trust—on *him* it rests to say what should or should not be done. If this is true of operations in general, how true must it be of such an operation as this—an operation so disgusting and revolting in appearance, that an eye-witness declares that, of "upwards of two hundred spectators present, many became faint, and some were carried out of the theatre—such was the scene"* of an operation founded on the diagnosis

* Lond. Med. and Surg. Jour. No. 254.

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of a morbid growth, of which a patient must of course be ignorant—an operation attended with urgent risk, and liable to be followed, as the event proved, with speedy death.

The intelligent reader need not be told, that there are not merely two parties in a question of this nature—but that, besides the interest of the patient and the reputation of the surgeon, the wider interests of humanity and the character of science are involved. An unsuccessful operation, particularly if its details are bloody and disgusting, an unsuccessful operation, even if warranted by the soundest judgment, exerts a prejudicial effect on the community. The timid are alarmed, the cautious are shaken, and that one operation which has failed, will probably prevent many from submitting to operations which would prove successful. A doubt is thrown, both on the discrimination and the humanity of surgeons, and the vulgar may be excused for harbouring the prejudice, that opportunities for displaying brute force and sleight of hand are not always repudiated, when a life or a limb is on the issue.

The second reason for operating to which we shall allude, is founded on the tumor having followed a blow. A singular reason, because every body knows that malignant growths very frequently originate in slight local injuries. In fact when a local injury is followed by a morbid growth quite disproportioned to the amount of injury, that is presumptive evidence for, rather than against, constitutional vitiation.

The history of the case, the characters of the tumor, its examination when removed, all concur to prove that the disease *was* malignant, and the patient's rapid death, shocking as it may appear, was really a boon to him. Had he recovered from the immediate effects of the knife, he would in all probability have been reserved for a fate more lingering and more miserable—a return of the disease, with all *its* horrors.

We shall now extract the comments of the reporter, to which we have referred.

"Although the result of the operation performed in the above case, was unfortunate with regard to the suffering patient, it furnishes a useful lesson of admonition to students and young practitioners. Often does it happen that a surgeon who has just emerged from the portals of the college, seeks for opportunities to display his skill in operating, that he may thus establish his reputation as an operating surgeon. Is it not evident from the report of the case before us, that the first attempt of the juvenile aspirant might be made on a patient whose constitution, weakened and broken down by dissipation, could not recover from the shock thus inflicted upon his feeble powers? Ever should it be recollected, then, by young practitioners, that success after operations cannot be *ensured*. Advantageous as must be the result of this case to the student, and to the youthful members of the profession generally, it must prove of still greater value to Mr. Liston himself. The reputation of that gentleman as an operator stands unrivalled, and the dexterity which he possesses is a subject of astonishment with surgeons who have visited the continental hospitals. The public, therefore, on discovering that an operation may occasionally be followed by fatal consequences, even when it is performed by the most distinguished of our surgeons, will shrink in dismay from the thought of entrusting their lives, in diseases requiring operations, to half-instructed bunglers, who, under the pernicious influence of the system of nepotism, obtain the office of surgeon in our old endowed hospitals. The issue of the case of the patient, E. B., proves beyond question or dispute, that capital operations in surgery cannot be undertaken, with safety to the reputation of the practitioner, unless by such a man as Mr. Liston,—a surgeon of undoubted skill and established fame."

A more bungling attempt to protect a friend could scarce be made. From such friends Mr. Liston may pray Heaven to defend him. It would be difficult to string together a more gross collection of truisms and non-sequiturs, or having strung them, to lay on a thicker coat of the most dingy varnish.

Yet there is some ingenuity too. By

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a hocus-pocus process, the failure of Mr. Liston is made a proof of his consummate ability and a proof too of the ignorance of other people. He performs an operation, which probably, under the circumstances, no other London hospital surgeon would attempt. The patient dies from its effects. Ergo, those surgeons are "half-instructed bunglers," and he is a man of "undoubted skill." To be sure, we should be grateful for the novel information, that "success after operations cannot be ensured." That is a discovery which was certainly reserved for the reporter; yet withal, it may be doubted whether the "students and young practitioners" are quite such simpletons as to be led by the nose, although he so obligingly soaps it for them.

The climax of his reasoning, is reserved by the reporter for his concluding paragraph. E. B. being operated on by Mr. Liston, dies in consequence of the operation—*therefore*, the issue of E. B's case proves that capital operations cannot be undertaken with safety to the reputation of the operator, unless by such a man as, Mr. Liston!

In one sentiment we quite coincide—that this case will be of value to Mr. Liston himself. No doubt it will. 'Once singed, twice shy,' is a jockey's proverb.

We have noticed these cases at some little length, because they have been much talked of, and because they bear on a question of much interest and of vital consequence—the propriety of performing serious and dangerous operations for morbid growths. We have seen in our time a growing disinclination on the part of surgeons to perform, and on that even of students to witness, operations of doubtful utility. It is an honourable and a scientific trait in both, and is a part of that spirit, which happily is prevailing more and more, of avoiding the infliction of suffering both on man and brute, and respecting human life. We see its operation in the mitigation of penal codes—in the diminished frequency and milder laws of war—we see it even in popular revolutions—and, within the pale of our own body, we see it in the comparative disuse of the knife;—may that be less and less resorted to.

MISCELLANIES.

Hahnemania.

A Practical View of Homœopathy, &c. By Stephen Simpson, M.D.

By this the latest and best work on homœopathy, we learn that Hahnemann was little better than a madman, and hence we are authorized in the title which we give to this short article.

"The writer strongly protests against the denomination of homœopathist, but still more strongly against the imputation of Hahnemannian homœopathism, being firmly of opinion that Homœopathy, as it has recently been taught and practised by its great discoverer, is little better than a mere chimera."

Again—

"In the mean time, the writer unhesitatingly declares, that he holds the hypotheses of Hahnemann as altogether unsatisfactory, his practical rules deduced from them as contrary to experience, and his theory of Chronic Diseases as devoid of all proof; of which last indeed it has been very justly observed that 'what is in it is true, is not new, and what is new, is not true.'"

Still farther on—

"Many, indeed, of the disciples of Hahnemann, out of a laudable regard for the feelings of their venerable teacher, now in his eighty-second year, hesitate to pronounce their recantation of the errors into which he has unnecessarily led them by his too hasty deductions."*

* Simpson.

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What say the Hahnemaniacs and Hahnemuneale to this statement?—Here is the god of their idolatry at once deposed, and his empire—a small German principality it is true—usurped by one of his own disciples! But then, from the ashes of the chimera a phœnix is to rise, whose wings shall overspread the medical horizon, and cast in the shade all the systems and experience of former ages. We shall not waste much time on this system; but we may observe that, granting, for the sake of argument, that every part of this system of homœopathy was as true as Holy Writ, both in its principles and details, yet we assert, and hope to prove, from Dr. Simpson's own statements, that it is utterly incapable of being brought into practice among the profession of this or any other country in the world. It is only adapted for a few of the dilletanti who may choose to diddle dukes and humbug hypochondriacs—or for the dreams of enthusiasts, such as Hahnemann, and the respectable portion of his followers—amongst whom we have no hesitation in ranking Dr. Simpson and the few who have openly embraced homœopathy in this metropolis. But looking at the new system in all its bearings, and without the slightest prejudice or jealousy, we do believe that it opens the widest door to quackery and knavery that has ever yet been presented to the adventurous and unprincipled in our profession. This by the way. We now proceed to shew its impracticability in general.

Homœopathy must be learnt by practising on the healthy subject. "The individuals upon whom the trials are to be made, must be selected from both sexes and of different ages." "They must be in *perfect health*." "Every slight deviation from healthy action in the functions of the internal organs must render all experiments more or less liable to error." Then the diet must be most systematic. "All fermented liquors, coffee, and even tea, if possible, spices of every description, all green vegetables and roots, excepting green peas, kidney-beans, carrots, cauliflower and potatoes, &c. must be altogether avoided." And all this by people in health, the subjects of experiments!! But not only must multitudes of all ages and both sexes become the recipients of homœopathic remedies, when they are in perfect health, they must also be free from all over-exertion of mind or body—all free indulgence of the passions—there must be "no pressing affairs to divert the mind from an accurate analysis of the internal sensations of the body." The experiments must be "repeated in the *same individuals* under various modifications of it (diet) so as to determine the influence of circumstances, &c." Then, again, the medicines must be tried in large, small, and infinitesimal doses, still on multitudes of healthy people. "Not only must the symptoms themselves be taken down, but also the peculiar circumstances by which they may be in any way modified; whether as to the influence of position, of movement, of rest, of confined or open air, of atmospheric changes, of day or night, of eating and drinking, constitutional differences, &c."

The above are only a few of the labours and difficulties attendant on the study of homœopathy! We thought that, by abjuring anatomy, pathology, &c., the Hahnemaniac practice would be rendered simple and easy, as compared with that of allopathy. But no. The preliminary study of homœopathy, on the healthy population alone, would require half a century at least—and *then* the student would just be ready to commence attendance on the sick—when about the age of 70 years! Is it worth while to pursue the subject farther? We conscientiously think it is not. The Hahnemania, like other manias, will run its day, and vanish into thin air—though not before many lives are sacrificed at the altar of this new illusion. We may just hint, however, that from some facts which have come to our knowledge, there is a strong under-current of self-interest—perhaps something that deserves a harsher term—in HAHNEMANIA. For a long time past, it is well known that there has existed in the public mind, a strong prejudice against polypharmacy—or

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rather against the large quantities of medicine which the general practitioner is obliged to prescribe, in self-defence against a villainous system of remuneration. Here, then, is an excellent opening for a host of homœopathic *conformers* to break loose upon the public with the cry of war upon large doses of medicine, and *vivas* to the Hahnemaniac system of curing diseases with the decillionth part of a grain or drop of physic! If it be said that this is an ungenerous insinuation, we reply, look at the crowded state of the profession, and say whether there will not be found a certain portion of them, like Shakespeare's poor *apothecary*, whose necessities will force *them* to adopt means of subsistence which their consciences cannot approve?

One word before we part from Dr. Simpson. He has illustrated his system of Hahnemania by the detail of thirty-two cases. How many of these, gentle reader, do you suppose are from his own experience? Twenty? No. Fifteen? No. Ten? No. Five? No. ONE SINGLE CASE is adduced by the author of a new system, as a specimen of its working!! Thirty-one cases are raked up from the Hahnemaniac journals of Germany—where no detection of error or misrepresentation can be put in force! For our own parts, we put full as much credence in the wildest of Baron Munchausen's stories, as in the soberest of these German reveries. The slender and solitary basis which Dr. Simpson has given us from his own note-book, we shall here insert. Even this one case will give rise to reflections not very favourable to homœopathy?

"M. N***, a young gentleman, about six years of age residing in London, was attacked in June last by slight catarrhal symptoms, which readily gave way to the exhibition of two or three doses of chamomile. After the cough had altogether subsided, however, there remained a peculiar tone or flatness of the voice which induced me to believe that some mischief was going on in the windpipe, though at the time no other symptoms could be detected. I, therefore, directed the friends to let me know immediately should a return of the cough take place. In the afternoon of the same day, I received a note stating, that since dinner the little patient had been attacked by severe fever, and a particularly harsh and distressing cough: he also complained of pain about the windpipe. Having sent a dose of aconite 6, I determined to visit the child myself in the evening; but, before I could reach the house about nine o'clock, another messenger had been dispatched to say that the child was much worse and was threatened with suffocation: the nurse too had immediately recognized the disease as the croup, having some time previously attended a child labouring under that affection; and indeed, the character of the disease could not be mistaken, even without entering the room, by any one who had once heard a croupy cough. Since seven o'clock, the little patient had had several fits of coughing with great straining and occasional retching: *he was now lying in the most anxious disquiet, in a burning fever with a dry skin, an extremely frequent and quick pulse, a hurried and wheezing respiration with clangous tone and occasional fits of a shrill and suffocative cough, which prevented all repose; the voice too was scarcely audible, and there was tenderness of the larynx upon pressure.*

From the preceding catarrhal symptoms, the tenderness of the larynx, and the intensity of the fever, there could be no doubt of the inflammatory character of the disease, and hence the importance of arresting the inflammation before exudation should take place over the lining membrane of the windpipe. For this purpose aconite and spongia are the best known specifics. The first dose of aconite having been given about an hour previously, a second was now exhibited, and arrangements made to repeat it alternately with spongia 3, every hour till the symptoms should subside. About twelve o'clock, it was evident that a considerable amelioration had taken place, *as the skin was covered with a profuse perspiration*, and the cough and difficulty of breathing were less severe, so that though still restless, the little patient was able to

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get some sleep at intervals. The medicines were now ordered to be given every two hours. In this way the improvement proceeded very gradually till seven o'clock in the morning, when the child fell into a sound sleep, and awoke about ten o'clock perfectly free from fever with a soft and moist skin; the cough too had become quite loose and entirely lost its croupy tone, and the voice was nearly natural, though still a little hoarse. As the bowels were much constipated, a dose of nux vom. 12, was given at night with the desired effect, and subsequently a dose or two of drosera 3, to remove the slight remaining hoarseness and cough, with which the treatment was concluded and the health of the patient rapidly restored."

We have marked a passage in italics, and we ask any man who has had the least experience in croup, whether he would trust to aconite and sponge under the pressure of such symptoms as are there described? Fortunately for homœopathy, a profuse perspiration saved the life of the child and the credit of the system. Had the case proved fatal, would it have been recorded in the annals of Hahnemania?

Now Dr. Simpson either has had, or has not had personal experience in the practice of homœopathy. If he *has* had personal observation, why has he not illustrated the system from his own practice? If he has only had *one* case, how can he so confidently recommend the new doctrine? Utrum horum? But we dismiss the subject, because it is a very unprofitable one.

How to make Stays.

In our last number we noticed a very clever little book, by Mr. Coulson, on Deformities of the Chest. That book has arrived at a second edition, which lies at this instant before us. Amongst other things, it contains a chapter on stays, which is really both amusing and instructive. We would lay a bet that there is scarcely a surgeon in this country who knows the construction of the best modern stays. Yet they exercise a great influence on the figure—are of consequence in the treatment as well as prevention of deformities—and ought to be understood by all who may be called upon to treat such disorders. Mr. Coulson has seen things in the right light, and taken lessons in stay-making of Mrs. N. Geary, whom every body knows. Under these circumstances, it would be unpardonable, if we did not put our readers in the way of giving their fair patients a hint. And, if Sterne found that there were worse occupations than feeling a pretty woman's pulse, doctors may discover that there are less pleasant duties than lacing a lady's corset. But mind what you are about, *young* gentlemen—that's all. We are philosophers, and handle a "busk" or a "gore," without an idea of danger.

To proceed methodically:—There are, of course, three sorts of corset. 1. The corset for growing girls. 2. The demi-corset for the morning. 3. The complete corset. The pressure of the first is slight; being elastic in front, it yields to all the motions of the body, and when made with long and very elastic shoulder-straps, it allows perfect freedom of motion for exercise.

Demi-corsets for the morning are made about eight or ten inches in height, furnished here and there with light whalebones. In other respects, they are of the form of the upper part of the common corset; but the back edge ends in two long flaps, which are fastened in front by means of a tape. All this, however, is child's play. It is in the complete corset that the genius of Mrs. Geary has had full swing.

The problem to be solved was to support the figure, yet not to diminish freedom of motion—and to conceal the size of the abdomen, when too large.

"A little consideration of the shape will show that, in the back of the stays, extension throughout is chiefly wanted; in the front, extension throughout, and pressure inferiorly perhaps; and on the sides, extension throughout, slight pressure or support above, toward the bosom perhaps, and adaptation or pliability chiefly in the middle and below.

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The extension throughout the back should be produced by two pliant whalebones, or, in some cases perhaps, by two thin steels.

The extension throughout the front, and the pressure, if necessary, to repress any prominence inferiorly, should be produced by a tempered steel of about an inch and a half wide, bent inward in a semicircular form, and sufficiently long to extend over the prominence.

The whole front, however, should be capable of expansion horizontally or laterally, by a portion of it, corresponding to the busk, placed over it, and like it extending from the top to the bottom of the front, being formed of numerous transverse elastics, while the lining behind the busk is divided longitudinally; so that this structure expands, in the transverse direction, with every flexure of the body.

Persons whose breasts are close may wear, inside the corset, at the upper extremity of the pocket of the busk, a piece of cotton wadding covered with white kid, to prevent the disagreeble chafing which the corners of the busk may produce: but it must be remembered that this adds to the thickness, and consequently to the pressure, and it should not, therefore, be unnecessarily or carelessly done. At the other end of the busk, may be placed a flat wadding.

The extension, support and pliability on the sides, may have somewhat varied means, according to the form of the individual."

To support the breasts, the "gores" are made too short in general, and the bosom is eventually deformed, and marked with long white streaks. Now see what the talent of Mrs. Geary has done.

"With regard to these corsets, Mrs. N. Geary has introduced many remarkable reforms. They are now made lighter than they were lately; and the bosom is so formed as no longer to press injuriously upon the breast or to form a crease above it. The formation of the bosom, indeed, and of all parts adapted to prominences, in Mrs. N. Geary's stays, is a matter of great ingenuity, and of extraordinary beauty. To this she was led by a desire to obviate the perpetual and just complaints made by ladies of the tightness across the chest, just below the bosom gores, in the common stays. To obviate these, she forms the whole stay of some nineteen or twenty longitudinal portions, or portions extending from the top to the bottom of the stays. Each of these constituent portions is wider above or below, than it is in the middle. By means of this gradually increasing width, the bosom and other prominent parts are formed. A moment's reflection will show that, by varying the width of any one or two of these portions, such stays become capable of adaptation to every possible variety of form; and that the bosom and all the prominent parts are thus formed without a single gore or gusset. Instead, therefore, of presenting sharp angles which cut in upon the sides, and which either tear the skin or are themselves torn up, these portions, supported by slender bones, or thin steels where necessary, curve gently and smoothly over every corresponding curve of the chest, and at once exhibit all the beauty of the most perfect form, and yield the most perfect comfort. With great propriety, also, the bones at the lower and lateral part of the stays are all thrown either before or behind the hanch, so that upon the side, above the hanch, there is no bone to bend by the heat of the body, to form itself into an angle, and to excoriate the side, as in all other stays. Mrs. Geary's stays, constructed on these principles, are preservative at once of health and beauty, and are indispensable to dress, which give a perfect idea of their advantages."

Seriously, Mr. Coulson's book is lively, well written, and indicative of much ingenuity and practical information. We have no doubt that it will become extremely popular.

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ANEURISM OF THE ARTERIA INNOMINATA. By Sir DAVID J. H. DICKSON, M.D. Physician to the Royal Naval Hospital, Plymouth.

The following case, in detail, was read at the meeting of the British Association in Bristol last year. We have been favoured with an abstract of it by a friend.

A marine, aged 40, was received into the Plymouth Hospital, on the 5th of April, 1835, with indomitable cough, wheezing respiration, frothy expectoration, occasionally muco-purulent and scanty. He complained of tightness rather than pain, with oppression under the upper part of the sternum. The pulse was variable, being generally irregular. The breathing was loud and laborious, with mucous, sibilous, and sonorous rattle occasionally—the sibilous being the most predominant in the *exacerbations*, which assumed all the characters of asthma. At first it was supposed that there was chronic bronchitis, with thickening and narrowing of the air-tubes, and dilatation of the heart; but it was soon concluded that some tumor pressed upon the trachea. The weather and remedies had much influence over the symptoms at first, but gradually the relief was less marked—the dyspnœa became more urgent—the lips and face more livid—and the patient in a state bordering on asphyxia. He died on the 2d of June, 1836.

On removing the sternum a tumour, larger than an orange, presented itself, and proved to be an aneurism of the arteria innominata engaging the whole extent of that trunk. Pressure had rendered the left vena innominata impervious, and the blood had much difficulty in returning from the right vein—thus accounting for the turgid state of the vessels of the head and neck. The trachea was pressed upon and adherent to the tumour. The aorta, previously to giving off any of its principal branches, was enormously enlarged, and its coats unequally thickened, but without any deposits. A second aneurism, the size of a walnut, was seen appended to the artery, below the obliterated ductus arteriosus, by a narrow neck. The whole of the thoracic aorta was in a state of aneurismal dilatation. The aneurismal parts were nearly filled with concentric layers of coagulated blood, the most external being deprived of colouring matter, and intimately attached to the inner coats of the vessels. The rings of the trachea had resisted the pressure of the tumor, but the coats, and the inter-annular and mucous membranes were absorbed. The coats of the thoracic aorta throughout were thickened, softened, and deprived of elasticity. There was much frothy mucus in the bronchi, and the heart was larger than natural. The lungs were not diseased.

EXTRACT FROM THE CHARTER OF THE NEW LONDON UNIVERSITY.

The following passages embrace all the points of interest to the public, divested of technical forms and verbiage.

OFFICERS, &c. &c.

Our Right Trusty and Right Well-beloved Cousin William Cavendish Earl of Burlington,

The Right Reverend Father in God Edward Lord Bishop of Durham,

The Right Reverend Father in God William Lord Bishop of Chichester,

Our Right Trusty and Well-beloved Councillor Henry Baron Brougham and Vaux, and

Our Trusty and Well-beloved George Biddle Airy, Esq., our Astronomer Royal, and Fellow of the Royal Society,

Andrew Amos, Esq., Barrister at Law,

Thomas Arnold, Doctor in Divinity,

John Austin, Esq., Barrister at Law,

Neil Arnott, Esq., Doctor in Medicine,

John Bacot, Esq.,

Francis Beaufort, Esq., Captain in our Royal Navy, Hydrographer of the Admiralty, and Fellow of the Royal Society,

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William Thomas Brande, Esq., Vice-President of the Royal Society,

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James Clarke, Esq., Doctor in Medicine, Fellow of the College of Physicians, and of the Royal Society,

Philip Cecil Crampton, Esq., Doctor of Civil Law, Fellow of the Royal Society, and Our Surgeon-General in Ireland,

John Dalton, Esq., Doctor of Civil Law, and Fellow of the Royal Society,

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Michael Faraday, Esq., Doctor of Civil Law, Fellow of the Royal Society,

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Francis Kiernan, Esq.,

John George Shaw Lefevre, Esq., Fellow of the Royal Society,

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Sir James M'Grigor, Baronet, Doctor in Medicine, Doctor of Civil Law, Fellow of the Royal Society, Fellow of the College of Physicians, one of our Physicians Extraordinary, and Director-General of the Army Medical Board,

Richard Rainy Pennington, Esq.,

Jones Quain, Esq., Doctor in Medicine,

John Rideout, Esq.,

Peter Mark Roget, Esq., Doctor in Medicine, Secretary of the Royal Society,

Nassau William Senior, Esq., one of the Masters of Our High Court of Chancery, and Fellow of the Royal Society,

Joseph Henry Jerrard, Doctor of Laws, Principal of the Bristol College,

Richard Sheepshanks, Clerk, Fellow of the Royal Society,

John Sims, Esq., Doctor in Medicine,

Cornop Thirlwall, Clerk, Fellow of Trinity College, Cambridge,

James Walker, Esq., Fellow of the Royal Society, and

Henry Warburton, Esq., Member of the Commons' House of Parliament, and Fellow of the Royal Society.

That the Chancellor, Vice-Chancellor, and Fellows for the time being, shall have the entire management of, and superintendence over the affairs, concerns, and property of the said University; and in all cases unprovided for by this our charter, it shall be lawful for the Chancellor, Vice-Chancellor, and Fellows, to act in such manner as shall appear to them best calculated to promote the purposes intended by the said University; and the said Chancellor, Vice-Chancellor, and Fellows, shall have full power from time to time to make, and also to alter, any by-laws and regulations (so as the same be not repugnant to the laws of our realm, or to the general objects and provisions of this our charter), touching the examinations for degrees and the granting of the same, and touching the mode and time of convening the meetings of the Chancellor, Vice-Chancellor, and Fellows, and in general touching all other matters whatsoever regarding the said University; and all such by-laws and regulations, when reduced into writing, and after the common seal of the said University shall have been affixed thereto, shall be binding upon all persons members thereof, and all candidates for degrees to be conferred by the same, all such by-laws and regulations having been first submitted to one of our principal Secretaries of State, and approved of, and countersigned by him.

That once, at least, in every year, the said Chancellor, Vice-Chancellor, and Fellows, shall cause to be held an examination of candidates for degrees; and on every such examination the candidates shall be examined, either by examiners appointed for the purpose from among the Fellows, by the said Chancellor, Vice-Chancellor, and Fellows, or by other examiners so to be appointed; and that on every such examination the candidates shall be examined in as many branches of general know-

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ledge as the said Chancellor, Vice-Chancellor, and Fellows, shall consider the most fitting subjects of such examination. And whereas it is expedient to extend the benefits of colleges and establishments already instituted, or which may be hereafter instituted, for the promotion of literature, science, and art, whether incorporated or not incorporated, by connecting them for such purposes with the University created by this our royal charter, We do hereby further will and ordain that all persons shall be admitted as candidates for the respective degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, or Doctor of Laws, to be conferred by the said University of London, on presenting to the said Chancellor, Vice-Chancellor, and Fellows, a certificate from any of the institutions hereinafter mentioned, to the effect that such candidate has completed the course of instruction which the said Chancellor, Vice-Chancellor, and Fellows, by regulation in that behalf shall determine.

That such certificates as aforesaid may be granted from our college called University College, or from our college called King's College, both situate in London, or from such other institution, corporate, or unincorporate, as now is, or hereafter shall be, established for the purposes of education, whether in the metropolis or elsewhere within our United Kingdom, and as we, under our sign manual, shall hereafter authorise to issue such certificates.

And for the purpose of granting the degrees of Bachelor of Medicine, and Doctor of Medicine, *and for the improvement of medical education in all its branches, as well in medicine as in surgery, midwifery, and pharmacy*:—We do further hereby will and ordain that the said Chancellor, Vice-Chancellor, and Fellows, shall, from time to time, report to one of our principal Secretaries of State, what appear to them to be the medical institutions and schools, whether corporate or unincorporated, in this our metropolis, or in other parts of our United Kingdom, from which, either singly or jointly with other medical institutions and schools in the country, or in foreign parts, it may be fit and expedient, in the judgment of the said Chancellor, Vice-Chancellor, and Fellows, to admit candidates for medical degrees, and on approval of such report by our said Secretary of State, shall admit all persons as candidates for the respective degrees of Bachelor of Medicine, and Doctor of Medicine, to be conferred by the said University, on presenting to the said Chancellor, Vice-Chancellor, and Fellows, a certificate from any such institution or school, to the effect that such candidate has completed the course of instruction which the said Chancellor, Vice-Chancellor, and Fellows, by regulation in that behalf shall determine; and it shall be lawful for the said Chancellor, Vice-Chancellor, and Fellows, from time to time, with the approval of one of our principal Secretaries of State, to vary, alter, and amend any such reports, by striking out any of the said institutions or schools included therein, or by adding others thereunto.

That the said Chancellor, Vice-Chancellor, and Fellows, shall have power, after examination, to confer the several degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, Doctor of Laws, *Bachelor of Medicine, Doctor of Medicine, and to examine for medical degrees in the four branches of medicine, surgery, midwifery, and pharmacy*, and that such reasonable fees shall be charged for the degrees so conferred as the said Chancellor, Vice-Chancellor, and Fellows, with the approbation of the Commissioners of our Treasury, shall from time to time direct; and such fees shall be carried to one general fee fund for the payment of the expences of the said University, under the directions and regulations of the Commissioners of our Treasury, to whom the accounts of income and expenditure of the said University shall once in every year be submitted, which accounts shall be subject to such examination and audit as the said Commissioners may direct.

That at the conclusion of every examination of the candidates, the examiners shall declare the name of every candidate whom they shall have deemed to be entitled to any of the said degrees, and the departments of know-

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ledge in which his proficiency shall have been evinced, and also his proficiency in relation to that of other candidates, and he shall receive from the said Chancellor a certificate, under the seal of the said University of London, and signed by the said Chancellor, in which the particulars so declared shall be stated.

Provided always, that all by-laws and regulations made from time to time touching the examinations of candidates, and granting of degrees, shall be submitted for the consideration of one of our principal Secretaries of State, to be approved of by him.

ORDINANCE OF THE COLLEGE OF SURGEONS ON THE RECOGNITION OF TEACHERS.

The slovenly manner in which every thing relative to public instruction is managed in this country, has long been a subject of astonishment to intelligent foreigners, and of regret to the thinking portion of ourselves. For aught that our public bodies can tell, teachers may be more ignorant than pupils, and there is no efficient guarantee for their possession of an adequate amount and kind of information.

They "manage these things," and many others, "better in France."—There, normal schools are established for the education of teachers, and the latter are not allowed to commence the business of instruction, until they have submitted to a formal examination, and have obtained the credentials of qualification for their office.

This is a plan so consistent with the rules of common sense, that it is wonderful that any government which professes to watch over the best interests of its subjects, could neglect it. The attention of our own Legislature has been drawn to the subject, and at the present moment there is in existence in this country an Education Society, and Education Committee, comprising the most able, liberal, and philanthropical men of the day, whose professed object is to effect the establishment of normal schools and examinations for teachers.

The College of Surgeons have in this instance shewed their community of feeling with the spirit of the age, and disregarding the outcry which ignorance may excite, have published the following very proper Ordinance.

"The Council of the College, at an extraordinary meeting, on the 1st instant, established the following Ordinance, relating the recognition of the certificates of teachers of anatomy and surgery in England and Wales:—

That in future no person be recognized by this College as a teacher of anatomy, physiology, and pathology, or in surgery, in England and Wales, until he shall have undergone an examination before the Council of the College on two separate days. The first examination to be in anatomy and physiology; the second in pathology, and on the principles and practice of surgery.

That no fee be demanded for these examinations; and that the recognition of the College be conveyed in the usual form of a letter from the Secretary.

By order,

EDMUND BELFOUR, *Sec.*

November, 18, 1836."

It is evident that this Ordinance is prospective only. It says that *in future* no teacher shall be *recognized*, except in compliance with its enactments. The act of recognition, as every body concerned in teaching knows, is a summary and final one. A teacher applies to the College for the recognition. The College assents or refuses, and if it assents there is an end of the matter. All who are at present teachers have been recognized, and of course, and properly, the Ordinance does not affect them.

The only rational objection that can be urged against this measure, is one that deserves the most serious consideration. It may be said that the Council consists of those who are teachers now, and that they ought not to be judges in cases of men who must be their friends or rivals. A very proper and unanswerable observation. It is quite clear that either no teacher should be a member of the Council, or that the Council should not be an ex-

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amining body. The College had best look to this, for if existing teachers are to decide on the competency of future ones, this otherwise judicious regulation will end only in failure and disgrace.

PARISIAN MEDICAL CLUB.

When we wrote our remarks on the probable, or at least possible, consequences of these institutions in this country, we had no idea that they were assuming such a magnitude among our Gallic neighbours. A club, on a large scale, is in the course of organization in Paris, embracing the names of Marjolin, Lisfranc, Amussat, Jul. Cloquet, Magendie, Biett, Bouillaud, Rostan, Esquirol, and many others!! The members are to pay 22 francs annually, in return for which they are guaranteed medical and surgical advice and attendance—medicines—and even nurses! All operations, of whatever nature, are included. Even the teeth are to be operated on, renewed, &c. for the annual sum of less than a pound sterling! If this be not a "sign of the times," we confess that we are blind to signals. Our Dublin contemporary consoles himself with the reflection that "mankind value most what costs them most." This may be the case; but then there are more than one set of ideas in the minds of men. Phrenologists have discovered organs in the brain which counteract other organs, or neutralize them. So there are such things as avarice, economy, poverty, &c. which may very much limit the above-mentioned principle of our sanguine contemporary. We suspect that things are not valued much *merely* because they cost much money, but because articles are generally dear that are good. One physician's advice costs the same as that of another—and yet we see people prefer giving the fee to some in preference of others. We every hour see opulent people running over the town in search of cheap bargains. How does this quadrate with the principle quoted? It is of very little consequence how the article is *valued*, after it is purchased. It is the *purchase* of the cheap article, and not the estimation of it subsequently, that affects the market.

CARIES OF THE BONES OF THE ELBOW JOINT CURED BY EXCISION. By JAMES EDWARD, M.D. of Forfar.

Peter Crammond, labourer, aged 18 years, applied to me about sixteen months ago, complaining of acute pain in the elbow-joint, for which he could assign no reason. In examining it, the slightest motion increased the pain, and the surrounding integuments were swollen, but retained their natural colour. The arm was a little emaciated, both above and below the joint, but no fluctuation could be detected, and all the remedies that were applied had but little effect. About nine months after he became my patient, the pain and swelling increased, and the surrounding integuments lost their natural colour; now, also, a distinct fluctuation could be perceived at the inner side of the olecranon. By making an incision through the integuments into the abscess, and by introducing a probe, caries of the heads of the bones could be felt. A few weeks after this, fluctuation could also be distinguished over the head of the radius; when the abscess was opened, fætid matter issued, and, by probing, caries of the bone could be discovered. A great many remedies had now been applied by different medical men, but all without effect, and on going to the Dundee Infirmary, amputation was there proposed, to which the patient would not consent. About six weeks ago, after his health had suffered severely, his pulse being quick, his appetite greatly impaired, and profuse sweats occurring occasionally, I prevailed on him to allow me to remove the heads of bones of the joint. I performed the operation in the following manner.

After placing the patient on his face on a table, an assistant kept the arm in a proper position, and then, care being taken to avoid the ulnar nerve, a transverse incision was made into the joint

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close above the olecranon, extending from the inner side of the process to the external tuberosity of the humerus. Next, an incision about two inches in length, was made upwards and downwards, in the longitudinal direction of the arm, forming two square flaps, and giving the wound (as is recommended by Professor Syme), the resemblance of the letter H. The flaps were next detached from the parts below them; the olecranon and sigmoid cavity of the ulna, and the head of the radius were taken off by Liston's bone forceps. The ligaments and soft parts around the lower end of the humerus were carefully separated from the bone for about two inches upward. The extremity of the humerus was then sawed off beyond the tuberosities. The patient lost but little blood in the operation, which lasted for three quarters of an hour, and a few small bloodvessels only required to be secured by ligatures. The edges of the wound were brought together by adhesive plaster, compress and bandage, and the arm was placed in a sling in a semibent position. Smart febrile excitement supervened for a few days after the operation, but by cooling lotions to the arm, purgatives, opium and calomel, this excitement was soon abated, and his strength was gradually restored by a nourishing diet and gentle exercise. The wound has now closed, and he can turn his arm, which is about two inches shorter than the other, inward and outward, and suspend a heavy weight, and also raise it to a considerable distance. On examining the excised parts of the bones, the head of the ulna, radius, and humerus, were very carious and diseased. The articular cartilages were ulcerated in several parts towards the synovial surface, and were softened and almost detached from the extremities of the bones. This operation, in my opinion, is a severe shock to the system, but I am convinced there are very few patients labouring under such a malady, who would not rather submit to it, severe as it is, than to amputation. The arm, with all its deficiencies, is already far better than any artificial substitute ever yet invented.

The preceding case is highly creditable to Dr. Edwards. We insert it in order to shew, what is indeed unnecessary, the diffusion of sound scientific principles, and of practical attainments among our provincial brethren.

How to become a Crack Physician, 150 Years ago. By Dr. Mandeville.

"Where shall you find a physician now-a-days, who makes that stay with his patients, which it is plain the ancients must have done to make the noble prognosticks we have from them. But this would not only be too laborious, but a tedious way of getting money: self-interest now gives better lessons to young physicians. If you are not extraordinary in any of the branches I have named, rather than that you should spend your time before the squalid beds of poor patients, and bear with the unsavory smells of a crowded hospital, show yourself a scholar, write a poem, either a good one, or a large one, compose a Latin oration, or do but translate something out of that language with your name to it. If you can do none of all these, marry into a good family, and your relations will help you into practice: or else cringe and make your court to half a dozen noted apothecaries, promise 'em to prescribe loads of physic, never to forget the melodious sound of *bolus*, and always to make your bills like the chimes of the Exchange—ring with a "repetatur tertia quaque hora:" nay, get but in favour with one that has great business, and your's is done. Otherwise be a rigid party-man; it is all one Whig or Tory, so you are but violent enough of either side;—or, if you can chat, and be a good companion, you may drink yourself into practice; but if you are too dull for what I have hitherto named, and in reality good for nothing, you must say little, and be civil to all the world—keep a set of coffee-houses, observe your certain hours, and take care you are often sent for where you are, and asked for where you are not; but though in them you are forced to sit idle and loiter away your time

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all day long, yet out of 'em always counterfeit a man that is in haste, and wanted in a great many places. As for the rest, study what Demea said of his brother, to be clemens, placidus, nullios lædere, arridere omnibus; contradict nobody, never open your lips without a smile, and give no peace to your hat."

PROVINCIAL MEDICAL JOURNAL.

A new periodical of this description is about to appear in Ireland, under the editorial management of Mr. Phelan, already well known to the profession. We think it likely to succeed. It is to be conducted on what may be termed liberal or popular principles, and with an especial eye to medical reform. It is true that a provincial medical journal never did, and probably never will, succeed in England. The reason is obvious. There are always four or five metropolitan journals in existence, the great majority of which are liberal, and which journals can be circulated with far more celerity through the country, than can any journal from a provincial town. In Ireland it is very different. Only one metropolitan journal exists there—and it has a strong leaning to aristocratic principles, though conducted with great talent and honorable feeling. Still there is great room for a periodical in that country, which would take on a more popular character, and advocate freely, but temperately, reform of medical abuses. We see that there has been a public meeting in Clonmel, where pledges have been given to support a journal of the above description. We need hardly say that we wish it every success, and shall contribute to make it known abroad and at home.

LEECH TRADE.

France, Hungary, and Germany are nearly exhausted of leeches, and the trade is now supplied from Wallachia and Moldavia. Depôts are established at Bucharest, whence they are brought to France in the post-carts. In 1825, France exported more than a million; and now, as above stated, is obliged to import.

Is this the effect of the doctrine physiologique? What a triumph to Broussais is this. He has created in France a new commerce, and, as is the case with all conquerors, his glory is at the expense of blood. Here is another subject for the pen of the author of the "Conquetes des Français."

A NOTABLE DISCOVERY.

Most practitioners have felt the disappointment of not being able to draw blood from the veins of the arm, at times when they were most anxious to do so. A German discovery to remedy this inconvenience has been copied by most of our contemporaries. The plan is said to be "applicable to all cases where open veins do not give a sufficient quantity of blood, or in bleeding fat persons where the veins are not apparent." M. Burdach tells us that, in such cases, it is only necessary to apply a ligature to the *other arm*, when, in a few minutes, *both* arms will swell with blood, and then the ligature (which ligature?) is to be relaxed, and compression is to be made with the thumb, "that the blood may flow in a jet." Upon what physiological principle this phenomenon is to be explained we know not. We dare not deny that the moon is made of green cheese—because we cannot disprove the assertion. But we are strongly disposed to the truth of this discovery, and for a reason which must come home to the memory of every man of experience—namely, that we have all seen *both arms tied up*, and the phlebotomist digging into every vein, visible or invisible, without success. The practice of applying ligatures to both arms and both legs, to stop an ague fit, had something to ground a *rationale* on, because, when the round of the circulation was materially narrowed, it might be expected that the current would be augmented in the circumscribed channels, and the cold fit of ague shortened. But this piece of transcendentalism transcends even the imagination, and leaves us in the comfortable creed of the Italian—"credo quia impossible."

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Dr. Bostock's Erratum.

Sir,—In the last Number of your Journal, you have inserted an analysis of mine, as an appendage to Mr. Coulson's paper; there is in it a typographical error, which somewhat affects the sense, or at least the correctness of the description. It is the last word of the second paragraph, which is printed "urine," but which ought to be "urea" —an error which, I doubt not, is attributable to my bad writing. Perhaps you would not object to stating it as an erratum in your next Number, or at the end of your volume.

I hope you will pardon me for giving you this trouble, and believe me,

Your most obedient,

Upper Bedford-pl. J. Bostock.
Oct. 14th, 1836.

Phlebitis.

Mr. Harrold, of Cheshunt, writes to us that, when attending the London Hospital in 1790-1, phlebitis was found to be of very frequent occurrence, and the cause was at length traced to the use of soiled sponges, applied to the incisions to cleanse them before the bandage was applied. Sir Wm. Blizard gave an order that no such sponges should be employed, and phlebitis disappeared.

Obituary.

We regret to record the death of a very able medical practitioner, Mr. Sheppard, of Witney—a half-pay naval surgeon, and a man of excellent abilities. He was lately appointed by the Admiralty to revise and collate the medical journals of the navy, in order that a report might be prepared on the state of health in our ships of war, and embracing various other topics of interest. He had scarcely entered on his new avocation, however, before he experienced an apoplectic seizure, while writing at his desk in Somerset-place. From this he recovered, and went down to Witney, where he had a relapse, and died in the course of an hour. He was the author of a great part of the Eclectic Article on Yellow Fever in Dr. Johnson's third and subsequent editions of his work on Tropical Climates. He has left two children, now bereaved of both parents, to mourn their irreparable loss.

BIBLIOGRAPHICAL RECORD;

OR,

Works received for Review since last Quarter.

1. A History of British Quadrupeds. By Thomas Bell, FRS. &c. Lecturer on Comparative Anatomy at Guy's Hospital. Part III. price 2*s.* 6*d.* illustrated with Woodcuts and numerous Vignettes. 1st Sept. 1836.

☞ *The account of the Mole is here concluded—the different kinds of Shrew are described—the Badger is included—as is the Otter. The Weasel is commenced. The work is highly deserving of encouragement.*

2. Facts and Cases in Obstetric Medicine, with Observations on some of the most important Diseases incidental to Females. By J. T. Ingleby, M.R.C.S. Senior Surgeon to the General Dispensary, &c. Birmingham. One Vol. 8vo, pp. 296. Longman and Co. 1836.

3. The Human Brain, its Configuration, Structure, Development, and Physiology, illustrated by Reference to the Nervous System in the Lower Order of Animals. By Samuel Solly, Lecturer on Anatomy and Physiology in St. Thomas's Hospital, &c. Octavo, pp. 402, with 12 Plates. Longman and Co. 1836, price 12*s* 6*d*.

4. An Account of the most frequented Watering-places on the Continent, and of the Medicinal Application of their Mineral Springs, with Tables of Analysis, &c. and an Appendix on English Mineral Waters. By Edwin Lee, Esq. M.R.C.S. Octavo, pp. 232. Longman and Co. Oct. 1836.

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5. A Medical Vocabulary, or Explanation of all Names, Synonyms, Terms, and Phrases used in Medicine, Surgery, and the relative Branches, with correct Derivation, and Directions for the proper Pronunciation of each, &c. Duodecimo, pp. 185. Carfrae, Edinb. October, 1836, price 4*s.* 6*d.*

☞ *This is really a very clever and compact vocabulary, equally useful to the student and practitioner.*

6. A Treatise on Tetanus, being the Essay for which the Jacksonian Prize, for the Year 1834, was awarded by the Royal College of Surgeons in London. By Thomas Blizard Curling, Assistant-Surgeon to the London Hospital, and Lecturer on Morbid Anatomy. Royal 8vo. pp. 236. Oct. 1836, price 8*s.* Rivington—Highley.

7. Guy's Hospital Reports, No. 3, Sept. 1836. Edited by G. H. Barlow, M.D. and J. P. Babington, M.A. Octavo. Highley, Oct. 1st, 1836.

8. The Clinique Medicale; or Reports of Medical Cases. By G. Andral, M.D. Condensed and translated by D. Spillan, M.D. Part V. containing Diseases of the Abdomen. Renshaw, Oct. 1836.

9. A History of British Quadrupeds. By Thos. Bell, F.R.S. Part IV. price 2*s.* 6*d.*

☞ *Weasels concluded—Marten's Wild Cat—Domestic Cat. All very masterly.*

10. On the Disease of the Hip-joint: With plain and coloured Plates. By William Coulson, Consulting-Surgeon to the London Lying-in Hospital—late Surgeon to the General Dispensary, &c. Quarto, pp. 111, with many Plates. Oct. 1836. Thomas Hurst.

11. Statistics of Phrenology; being a Sketch of the Progress and present State of that Science in the British Isles. By Henry C. Watson. Longman and Co. 1836.

12. A History of British Quadrupeds, &c. Part V.

☞ *This Part is occupied with the "Dog," and is executed with great ability.*

13. A System of Phrenology. By Geo. Combe In two Vols. 8vo, 4th Edition. Edinb. and London, Nov. 1836.

☞ *Large additions have been made to the present edition—improved cuts have been used—and reference has been made to various other phrenological works, so as to render this Edition an index to the general literature of the science.*

14. The British Medical Almanack for 1837. Edited by William Farr. Octavo, pp. 215. Sherwood and Co. 1836, price 3s. with Supplement.

☞ *This Work is more copious than that of Mr. Foote. It is a pity that there should be two works of the same kind. One must hurt the other; and the profession cannot afford to buy both.*

15. Medical Report of the Managers of the Lunatic Asylum of Aberdeen. May 26th, 1836.

16. Outlines of a Course of Lectures on Medical Jurisprudence. By Thos. Stewart Trail, M.D. Regius Professor of Medical Jurisprudence in the University of Edinburgh. 1836.

17. Elements of the Practice of Physic, presenting a View of the present State of Special Pathology and Therapeutics. By David Craigie, M.D. &c. Vol. I. pp. 942. A. and C. Black, Edinb. Nov. 1836.

☞ *This volume embraces fevers, cutaneous inflammations, and mucous inflammations.*

18. Catalogue Raisonnée, or Classified Arrangement of the Books in the Library of the Medical Society of Edinb. Octavo, pp. 342. Edinb. Nov. 1836.

19. An Examination of Mr. Scott's Attack upon Mr. Combe's Constitution of Man. By Hewett C. Watson. Octavo, price 6*d.* Edinb. 1836.

20. A practical Treatise on the Management and Diseases of Children. By Richard T. Evanson, M.D. Professor of Medicine, and Henry Maunsell, M D. Prof. of Midwifery, in the Royal College of Surgeons, Ireland. Small 8vo, pp. 527, price 7*s.* 6*d.* Dublin, Nov. 1836.

21. Statement of the Proceedings which have led to the Resignation of the Medical Officers of the Northern Dispensary. Octavo, sewed.

☞ *As far as we can see, the medical officers abovementioned had good reason for resigning, and deserve praise for their spirited and unanimous conduct.*

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22. The Principles of Surgery. By JAS. SYME, F.R.S. E. Professor of Clinical Surgery in the University of Edinburgh. Second Edit. Dec. 1836.

☞ *Greatly enlarged in matter, but, by means of small type, not increased in size.*

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23. Lectures on the Morbid Anatomy of the Mucous and Serous Membranes. In two Vols. By THOMAS HODGKIN, M.D. Vol. I.—the Serous Membranes. November, 1836.

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24. The Medical Pocket-book for 1837. By JOHN FOOTE, jun. Renshaw and Rush.

A very useful vade-mecum.

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25. A familiar Treatise on the Natural History of the Silk-worm. By H. W. DEWHURST, Esq. &c. Duodecimo, with a Plate, price 2*s* 6*d*.

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26. Engravings of Varieties in the Origin, Course, and Distribution of the Arteries, chiefly from Original Observations and Drawings, with descriptive Letterpress. By JOHN KNOX, F.R.S.E. *Fasciculus* 1. *External Carotids—Radial Artery—Peroneal Artery—Anterior Tibial Artery.* Edin. Nov. 1836.

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27. A Bedside Manual of Physical Diagnoses, applied to Diseases of the Lungs, Pleura, Heart, &c. By CHARLES COWAN, M.D. Translator of Louis on Phthisis. 18mo, pp. 58. Sherwood, 2*s*. 6*d*.

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28. Phrenology vindicated; being a Reply to an Article in the Quarterly Review for Sept. 1836. By JOS. TOULMAN SMITH, of Lincoln's Inn, Esq. Octavo, pp. 80, sewed, Longmans, 1836.

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29. A Series of Anatomical Plates, &c. By JONAS QUAIN and WM. J. E. WILSON. Fasciculi 30 to 42 inclusive, price 2*s*. each.

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30. Animal Magnetism and Homœopathy. By E. LEE. Octavo, sewed.

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31. A Treatise on Consumption, &c. By WILLIAM SWEELSER, M.D. Boston, 1836.

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32. A Practical View of Homœopathy; being an Address to British Practitioners on the general Applicability and superior Efficacy of the Homœopathic Method in the Treatment of Disease; with Cases. By STEPHEN SIMPSON, M.D. Octavo. Baillière, Nov. 1836.

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33. Experimental Researches into the Physiology of the Human Voice. A Memoir, by JOHN BISHOP, M.R.C.S. &c. Octavo, pp. 24. with Plates.

---

35. Elements of Medicine. Vol. I. on Morbid Poisons. By ROBERT WILLIAMS, M.D. Senior Physician to St. Thomas's Hospital. Octavo, pp. 342.

☞ *This valuable volume treats of Typhus, Scarlatina, Measles, Variola, Varicella, Erysipelas, and Pertussis. It will be reviewed in our next Number.*

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36. A History of British Quadrupeds. By THOMAS BELL, F.R.S. Part VI. price 2s. 6d.

☞ *Irish Greyhound, or Wolf-dog—Newfoundland Dog—Bull Dog—Mastiff—Vulpes—Phoca, Seal—Sea-calf—Harp seal—Great Seal—Grey Seal—Sea-horse. All well described and admirably delineated.*

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36. Observations on the Construction and Use of the Respirator; an Instrument for facilitating the Respiration of Persons suffering under Pulmonary and Bronchial Affections, by warming the Air inspired, &c. Octavo, pp. 12. Hodson, London, Dec. 1836.

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37. Anatomical, Pathological, and Therapeutical Researches upon the Disease known under the Name of Gastro-Enterite, putrid, adynamic, ataxic, or typhoid Fever, &c. compared with the most common Acute Diseases. By P. CH. A. LOUIS, M.D. &c. translated from the original French. By HENRY BOWDITCH, M.D. In two Vols. 8vo. Boston (America) 1836, and Kennet, York-street, Covent-garden.

☞ *This is a highly valuable work, and ought to be in the hands of every practitioner in this country.*

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38. Di una Legatura dell'Arteria Ascellare all'Uscire di Sotto alla clavicola per Emorragia al Cavo Ascella. Osservatione seguita da Pratiche considerazioni sulli Emorragie Arteriose, e sul Processo Operativo da preferirsi nella suddetta Operazione. Di NATALE CATANOSO, M.D. &c. Di Messina.

☞ *In our next.*

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EXTRA-LIMITES.

RECLAMATION OF DR. HAMILTON.

Dr. Hamilton, the Professor of Midwifery in the University of Edinburgh, has published, and widely circulated, a long and somewhat discourteous Letter, addressed to Dr. Johnson, complaining of some observations which we have made on his recent work in the number of this Journal for last July, and charging us with misrepresentation of his opinions and perversion of recorded facts.

We have no doubt that we shall be able to satisfy most of our readers, and probably Dr. Hamilton himself, that he has acted hastily and imprudently in challenging us to a re-examination of some parts of his work.

Many of the statements in it are so unguarded, that we were quite surprised, at the time, that any experienced practitioner could have published them without reserve or qualification. To accuse a reviewer of dishonesty and "mala-fides," is a very grave and serious charge; but one, which we unhesitatingly reject, as applicable to ourselves. It is not by such practices that the Medico-Chirurgical Review has obtained that confidence of the profession, and that influence on medical opinions, which Dr. Hamilton must have felt that it has. We proceed at once to examine the objections which he has made.

Dr. Hamilton's first charge of unfairness is founded on the following passage in our review: "Dr. H. asserts that he is able to distinguish unequivocally ovarian from ascitic dropsy, after paracentesis, by the following signs—'the peculiar appearance of the fluid, which in dropsy of the ovarium is commonly amber-coloured, and of the consistence of melted calf's-foot jelly, but more particularly the collapsed sac, distinctly perceivable on the day after tapping, like the contracted uterus on the day after delivery, afford certain evidence of dropsy of the ovarium.' On other subjects, as well as upon this, our author's language is far too peremptory, and, if unreservedly believed, might mislead an inexperienced practitioner." P. 41.

Dr. Hamilton's answer to these remarks is thus expressed:—

"The reviewer has called in question a fact which is so well known in this city, that it must excite surprise here that any practitioner should be ignorant of it, viz. that the most certain method of distinguishing dropsy of the ovarium from ascites is by tapping. In the former disease, the fluid drawn off is ropy and gelatinous, and after the operation, the collapsed sac can be as plainly distinguished through the parietes of the abdomen, as the collapsed uterus after child-bearing." 4.

Dr. Hamilton is quite in error, when he asserts that we have denied that "the most certain method of distinguishing dropsy of the ovarium from ascites is by tapping." We have never done so. We abide by the language, which we made use of at first—that neither he, nor any physician, is able to distinguish unequivocally ovarian from ascitic dropsy by any of the signs which he has mentioned.

Dr. Hamilton is surely well aware, that the fluid of ovarian dropsy is not uniformly "ropy and gelatinous;" but that sometimes, especially when there is only one large unilocular sac present, it is a thin, limpid, and straw-coloured serum. We may also add that the fluid in ascites is occasionally, as when the effusion is connected with disease of the peritoneum, of an almost syrupy consistence, and is at the same time turbid, and much discoloured.

With respect to the assertion that in all cases "the collapsed sac can be as plainly distinguished through the parietes of the abdomen, as the collapsed uterus after child-bearing," Dr. Hamilton must draw very largely on the credulity of his professional brethren, if he expects an unreserved assent to such a doctrine. Every pathologist knows that the sac or cyst of ovarian dropsy is sometimes quite thin and membranous, adhering, it may be, to the surrounding

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viscera, and unattended with any enlargement of the proper substance of the ovary. It is utterly impossible that such a sac, when emptied of its contents by tapping, can be as plainly distinguished through the abdominal parietes as the contracted uterus after delivery. Our author no doubt meaned to state that in many cases the collapsed sac is to be felt; certainly not in all, as he incautiously leads the reader to suppose.

Dr. Hamilton's second and third accusations are directed against some remarks, which we have made on a statement in his work that, "there are two circumstances which invariably attend pregnancy during the early months, viz. suppression of the catamenia, and a perceptible change on the surface of the mammæ surrounding the nipples." We objected to the authoritative and unqualified manner in which these assertions are made, and we expressed our sentiments thus:—"Dr. H. admits that, in some pregnant women, there may be periodical bloody discharges from the vagina; but he qualifies this admission by stating that there is always an irregularity in the date of the recurrence, (though, perhaps, to the extent only of a day or two,) as well as in the duration, the quantity and the quality of these discharges.* He may well add, 'in all doubtful cases accurate information on these points ought to be ascertained;'—the very difficulty consists in obtaining such accurate information. Let it not, however, be supposed that we differ in opinion from the Professor on the point at issue; our well-assured conviction is, that the *genuine* menstrual flow does not, and cannot take place during pregnancy; but of this we are equally certain, that not one woman in a thousand can distinguish *it* from other sanguineous discharges; and it is on their testimony that the accoucheur must in general found his opinion."

Dr. Hamilton replies:—

"In the 137th page of my work, there is the following strong denial of my belief in the possibility of '*periodical* bloody discharges during pregnancy.'

That, in some individuals a flow of blood is directed to the uterine arteries, during the first months of pregnancy, exactly at the regular periods of menstruation, indicated by a bloody discharge per vaginam, has been often alleged, but it does not consist with the experience of the author, that there ever was, strictly speaking, such an occurrence."

Not satisfied with having suppressed this passage, the reviewer has thought fit to substitute a different word for that which I had used, and in making this substitution, he has selected a word which not only misrepresents my opinion, but also renders the sentence ludicrous. How can periodical bloody discharges take place, if 'there be an irregularity in the date of the recurrence?' The reviewer has substituted *periodical* for IRREGULAR, which is my expression." 7.

This answer, it will be observed, is founded on a verbal quibble about the exact meaning of the word "periodical." Dr. Hamilton does not deny that he has admitted, in another part of his work, that, in some pregnant women, there are bloody discharges recurring about the same period of every month, and that the period of this monthly recurrence may not vary more than a day or two; but he intrenches himself against the objections which we have made, by stating that these bloody discharges do not return "exactly at the regular periods of menstruation." We may ask, do the catamenia always return exactly at the same period? Dr. Hamilton may be pleased to split a hair for the sake of dispute: we have no inclination to imitate him. His opinion is at variance with almost every authority, Denman excepted, on the subject. We could cite a score or two, if it was necessary; but shall adduce only one, whose experience and talents will be acknowledged by all. Dr Blundell states, in his Principles and Practice of Obstetricy, published two years ago:—"Notwithstanding what Denman has said to the contrary, I have myself known women in whom, during

* Dr. Hamilton, in extracting this passage from our Review, very unfairly halves it in two, and gives the reader only the former half, leaving out altogether those important words, "though, perhaps, to the extent only of a day or two."

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the first three or four months, the catamenia have continued to flow, though not in so large a quantity, nor so long, as if they were not pregnant." 165.

As to the other "invariable sign" and "unequivocal mark" of pregnancy, the perceptible change on the surface of the mammæ surrounding the nipples—we remarked at p. 43 of our Review—"Our own experience, and, we may add, that of almost all the latest and best writers on midwifery and on medical jurisprudence, do not certainly warrant that unqualified and unequivocal reliance on the changes of the areolæ, as a sign of early pregnancy, which Dr. H. puts in them."

Dr. Hamilton replies in the following terms:

"With every respect for writers on Medical Jurisprudence, I certainly cannot bow to their authority on a practical point of this nature, and so far from 'all the latest writers on Midwifery' disregarding this test, one of the latest and best writers, Dr. Montgomery of Dublin, has described this change round the nipple with a degree of minuteness which could only be suggested by truth, and has expressed himself in regard to the value of this test, in as strong language as I could have done." 8.

He proceeds to give a long extract from Dr. Montgomery's essay, in support of his opinion respecting the turgescence of the areolæ, but very wisely refrains from citing any other authority. We may, 'in limine,' ask Dr. Hamilton, if it is fair and honourable in him to substitute the expression, "all the latest writers on midwifery," for that of "almost all the latest and best writers on midwifery"? We were well aware of Dr. Montgomery's opinions, and have alluded to them in our review of his essay, two years and a half ago; but at the same time we know, and Dr. Hamilton knows, that by far the greater number of obstetrical writers and obstetrical observers do not admit that the turgescence of the areolæ is, as he maintains, an invariable and unequivocal sign of pregnancy. It is almost needless to refer to authorities on this point—Denman, Gooch, Burns, Velpeau, and a host of others, are opposed to our author. Even Dr. Montgomery himself, whose authority Dr. Hamilton so gladly calls to his support, but who is a much more cautious writer than Dr. H., thus expresses himself at one part of his essay:—

"At the same time, it should be observed that the areola does not always, in pregnant women, present all the characters we have described as belonging to it. We have seen it at the time of labour presenting the dark circle alone, without the prominence of the glandular follicles:" and again; "Their absence ought not to decide our opinion against the existence of pregancy, though their presence would be with us a very convincing proof of previous conception."

So much for the second and third charges of unfairness and misrepresentation brought against us by our honourable opponent.

The fourth charge need not detain us, as Dr. Hamilton is fortunately not disposed on this occasion to accuse us of any unfairness, or wish to misrepresent his statements. The only difference betwixt him and ourselves respects the treatment of the rare case, in which the first stage of labour is protracted in consequence of a rigid and constricted state of the cervix uteri. Dr. H. recommends the accoucheur to "introduce his finger above the stricture, and to press from within outwards on the resisting band of the uterus during each successive pain." In reviewing this passage, we observed that—

"The Professor's advice must be acted upon with great circumspection and gentleness. We are great enemies to all unnecessary manual interference in the management of labour, and we should be rather unwilling to carry the finger within the cervix uteri, above the seat of the stricture, for the purpose of pressing upon it from within." "We prefer the method recommended by Dr. Burns, of making the pressure merely on the anterior edge of the os uteri, as already explained in an extract given above." 14.

We see no reason to alter our opinion, and we are confident that most accoucheurs will agree in the propriety of our suggestions.

The fifth charge is introduced in the following manner:

"The next subject in which I must express my strong sense of the want of candour

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of the reviewer, is in the following words, p. 48.—'We wish that we could with propriety say as much for the succeeding chapter on the management of the second stage. Thirty pages of print to be occupied with recommending the accoucheur to apply his naked (without a napkin) hand to the perinæum, when the head is pressing down, and to smear the parts with soft lard. In truth, this is the sum and substance of the whole chapter.'

Perhaps it would be difficult to find in the annals of medical criticism, a more uncandid and unfounded assertion than that contained in this sentence." 15.

Dr. H. proceeds to vindicate himself by stating, that he deemed it necessary to quote the directions of Dr. Denman, of Dr. Davis, of Professor Burns, of MM. Baudelocque and Velpeau, for the purpose of shewing that the practice of all those gentlemen was both erroneous and dangerous; and moreover, that he has given other directions for the management of the second stage of labour, which we have neglected to mention—namely, "to remain by the patient from the time that the head of the infant clears the os uteri, and to force the perineum towards the pubes during every pain after the head begins to protrude."

To judge of the propriety of our strictures, the reader will find it necessary to examine the passage, which seems to have given the Professor so much annoyance, in connexion with what goes before. We had mentioned favourably the chapter on the management of the first stage of labour, and we gave the author credit for some valuable practical suggestions. The two next chapters appeared to us most uselessly prolix, more especially in a work, which so far from professing to give a systematic account of midwifery, has for its express object "to record," says the author, "my own opinions and discoveries."

The directions, with the exception of the last, are all very good, and we have not found any fault with them, but only with the excessively tedious manner, in which they are announced. In truth, the practice of every prudent accoucheur must be nearly the same in managing the second stage of natural labour, from the time that the head begins to protrude on the perineum until it is expelled. As a matter of course, he will not leave the bedside of his patient; and his great and leading duty is to give a broad and uniform support with his hand to the perineum, when the head presses down during the labour-pains. As for the use of lard, it is in many cases quite unnecessary, the parts being sufficiently lubricated by the vaginal discharges. However, it can do no harm; but then this, as well as the other directions, might have surely been expounded in less space, than thirty pages of print. The prolix and wearisome review of other writers, with extracts from their works, was most unnecessary in a book whose "professed object was to record the opinions and discoveries" of an author who, on certain occasions, as we shall presently see, does not deign even to allude to the opinions and discoveries of others, on a subject of the very greatest interest.

When the Practical Observations reach a second edition, Dr. Hamilton's good sense will, no doubt, lead him to compress the thirty wearisome pages into the compass of two or three.

We have now come to the last accusation which Dr. Hamilton prefers against us, and as it involves a question of great physiological interest, we shall treat of it at rather greater length, not certainly in the angry mood of our opponent, but with the calm and dispassionate temper of a searcher after truth.

Dr. H. charges us with "mala fides,"—in plain English, with wilful falsehood—for having penned the following passage at page 50, of our Review:

"Dr. H. says, that in his long experience he has in no instance found the pulse of the child, before it begins to breathe, to exceed sixty beats in a minute. Of the truth of this he has repeatedly convinced himself by counting the pulsations of the cord, not only while the child was still in utero, but also after its expulsion before respiration commenced. The experience, however, of his friend and coadjutor Dr. Moir, and, we need scarcely add, of all other accoucheurs, is directly opposed to the Professor's statements."

On this passage Dr. Hamilton angrily comments.

"The assertion of the reviewer, that the experience of Dr. John Moir is directly opposed to the Professor's statements, is a perversion of a recorded fact, which I shall not stoop to characterize. Dr. Moir, in reporting his experiments with the stethoscope, has thus expressed himself, page 312:—'This effect of the contractions of the uterus,

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acting indirectly on the circulation of the fœtus through the medium of the brain, may account *for the fact, that the pulsations of the heart are only about* 60 *in infants who do not breathe on birth*, but in whom the circulation still goes on through the chord.'

By this quotation, it is evident that Dr. Moir bears testimony to the truth of my account of the action of the fœtal heart before breathing; while your reviewer avers that the experience of Dr. Moir is directly *opposed* to the Professor's statements."

The reader, who has not referred to our Review, might no doubt suppose, from the extract which the Professor has so cunningly selected, that we had dishonestly concealed or perverted the results of Dr. Moir's experience, for the express purpose of contradicting our author's statements. But what is the truth? The very next passage to the one which Dr. Hamilton has quoted runs thus:—

" In several cases, where turning was necessary, Dr. Moir found that the pulsations of the fœtus in utero were 120 and upwards, and moreover that the number of pulsations ascertained with the hand corresponded exactly with those which he discovered by means of the stethoscope. It deserves, however, to be mentioned, that Dr. Moir invariably found that the number of the fœtal pulsations diminished greatly (sometimes from 120 to between 60 and 70), whenever uterine contraction supervened, and again increased, whenever the contraction was over. This circumstance is the more worthy of being noticed, as Dr. E. Kennedy has not alluded to it in his excellent work, and the reverse of it is maintained by Dr. Hohl, whose work we reviewed in the Foreign Periscope of our last number but one.

The assertion of Dr. Hamilton, that the pulse of the child immediately after delivery, provided respiration has not begun, is generally sixty or thereabouts, is surely quite incorrect."

We are called upon, out of respect to our character, to charge Dr. Hamilton with most disingenuous dealing, for having thus wilfully clipped and detached portions of our Review, in the vain hope of detecting us in dishonesty.

Will any one deny after perusing the foregoing extracts (or, if he prefers it, after reading Dr. Hamilton's book), that the experience of Dr. Moir is *directly opposed* to the Professor's unqualified and unguarded assertion, that the pulse of the fœtus is generally sixty or thereabouts? Dr. Moir seems to be too prudent a man to commit himself in a notorious error, to please Dr. Hamilton or any other person; and we find therefore that, in the letter which he has written to Dr. H. and which is printed in the pamphlet, he very properly repeats his former statement, that it is only under particular circumstances, that the pulse of the child is so low as 60 or 70.

We gave Dr. Moir credit for having pointed out to obstetricians the changes on the fœtal pulse during uterine contractions, and we invited the attention of practitioners to this hitherto unobserved occurrence. He was no doubt too well acquainted with the experience of Mayor, Laennec, Kergaradec, Velpeau, Ferguson, Kennedy, &c. to hazard the bold assertion, that the pulse of the fœtus is usually sixty or thereabouts. Not so with Dr. Hamilton. We shrewdly suspect that he values very cheaply the opinions and experience of other practitioners; perhaps he does not take the trouble of informing himself of them. He is candid enough to confess that he does not read our Review very regularly, and it seems that he was not aware of our censures, for nearly four months after they appeared.

Perhaps, therefore, he has not heard of the work of Dr. Hohl on Obstetrical Auscultation, of which we gave a minute analysis in the number for last January, and which we recommend to the Professor's notice. We need not mention the names of other authors—for they are better known—all of whom most unhesitatingly agree that the pulse of the fœtus is usually very rapid, beating from 120 to 140 or upwards.

In taking leave of Dr. Hamilton, we have much pleasure in repeating our expression of respect and admiration for his talents and great practical skill. Without these, he never could have attained the high rank which he has so long held as a skilful accoucheur, and as an able professor.

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THE

Medico-Chirurgical Review,

No. LII.

[No. 12 of a Decennial Series.]

JANUARY 1, to APRIL 1, 1837.

PATHOLOGICAL ANATOMY.

I. Outlines of Human Pathology. By *Herbert Mayo*, F.R.S., &c. &c. &c. Parts 1 and 2, 8vo. stitched, pp. 264—595. London, 1835-6.

II. Lectures on the Nervous System, and its Diseases. By *Marshall Hall*, M.D. F.R.S., &c. 8vo. pp. 171. London, 1836.

III. The Human Brain, its Configuration, Structure, Development, and Physiology; illustrated by References to the Nervous System in the Lower Orders of Animals. By *Samuel Solly*, Lecturer on Anatomy and Physiology in St. Thomas's Hospital. 12mo. pp. 492—XII. Plates, London, 1836.

IV. Lectures on the Morbid Anatomy of the Serous and Mucous Membranes. In two Volumes. Volume 1. On the Serous Membranes. By *Thomas Hodgkin*, M.D., &c. &c. 8vo. pp. 402. London, 1836.

V. Outlines of Physiology. By *Herbert Mayo*, F.R.S., &c. &c. Fourth Edition. 8vo. pp. 534, London, 1837.

VI. Pathological and Surgical Observations relating to Injuries of the Spinal Cord. By Sir *Benjamin Brodie*, Bart., Serjeant Surgeon to the King, and Surgeon to St. George's Hospital. (Med. Chir. Transactions, Vol. XX.)

VII. Illustrations of the Elementary Forms of Disease. By *Robert Carswell*, M.D., &c. Fasciculus Eleventh. Analogous Tissues.

We observed in the last number of this Journal, that we proposed to continue and extend our plan, of devoting at least one special article each quarter to the important subject of pathological anatomy. We say special article, for, probably there is scarcely *any* article to be found in the pages of a Medical Periodical, which has not more or less of such a pathological character.

A glance at the works whose titles we have here transcribed, or, indeed, at those titles only, must convince both the young student and experienced practitioner of the necessity of keeping pace with the advancing information of the day. Men of high talent are incessantly occupied in widening the

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boundaries of pathological knowledge, and a few years effect a very sensible difference in its limits.

The necessity for constant reading and study, does not simply depend on the daily accumulation of fresh facts and observations, but on the generalizations which are founded on the old. It is so short a time, since the field of Morbid Anatomy was first broken, that, although it has been ploughed, the crop is not yet ripe; the sickle is to come, and the sheaves are to be bound; nay, there are parts, over which neither plough nor harrow has yet travelled.

Periodical Reviews of the existing state of knowledge in a progressive science like medicine, are of equal interest and utility. Such reviews are peculiarly adapted for a journal with long intervals between its periods of publication. To a certain extent, almost every analytical article may be said to be of this description, for each work, at least each work of any value, is a mirror, in which the actual state of knowledge is reflected. But a more elaborate and comprehensive digest is desirable, and the reviewer who should regularly offer one, would confer no slight benefit upon his readers. The labour of such a task precludes the probability of its performance, for it would be totally incommensurate with any prize which even successful criticism has to give. We do not affect to undertake it, but shall content ourselves with occasionally presenting an article, which, founded upon several works, will gauge, in some measure, the scientific condition of the period.

I. PHYSIOLOGY OF THE SPINAL CORD.

In the 49th Number of this Journal, we took up the subject of the pathology of the cerebrum, and promised, at an early opportunity, to proceed to that of the spinal cord. This we shall now do. We shall take the works of Dr. Marshall Hall, of Mr. Mayo, and of Sir Benjamin Brodie, especially of the latter, for the text.

In order that the morbid affections of the cord may be clearly understood, it is necessary to say a few words on its anatomy and functions. The cord may be considered as terminating above, at the decussation of the anterior pyramids, or commencement of the medulla oblongata—and as ending below, opposite to the first or second lumbar vertebra, where it branches into the "cauda equina."

The cord represents a column, with a deeper anterior median furrow, and a shallower posterior one. There are also on each side two lateral grooves, if grooves they deserve to be called, from the anterior of which issue the anterior roots of the spinal nerves, and from the posterior of which spring their posterior roots.

The cord is composed of white nervous matter and of grey. The latter, the "cineritious neurine" is included within the white, which is external. The grey matter may be broadly said to represent, in each lateral half of the cord, a small segment of a circle, the concavity of which is turned outwards —the anterior horn forwards—the posterior backwards towards the origin of the posterior roots of the nerves—and the convexity is turned inwards, or towards the mesial line, across which runs a connecting band of grey matter, forming the union or commissure between the portions in the two halves of the cord. The quantity of grey matter is greatest at the lower part

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of the neck, and about the lowest dorsal and upper lumbar vertebræ; in fact, where the largest nerves spring from the cord. Each lateral half of the cord is divided into two columns. All before the posterior horn of grey matter is the antero-lateral column—all behind it is the posterior column, the former considerably larger than the latter. At the bottom of the anterior furrow are transverse fibres, constituting a commissure between the lateral segments. The grey matter of the cord is vascular and pulpy—the white is distinctly fibrous.

The exact origins of the spinal nerves, particularly of their posterior roots, are not determined—indeed there is some difference of opinion respecting the number of columns in the cord, and their divisions.

The anterior portion of the cord is continuous with the anterior pyramids, and olivary bodies of the medulla oblongata. The posterior portion of the cord is continuous with the posterior pyramids, or restiform bodies. The former may be loosely said to be expanded into the cerebral hemispheres—the latter into the cerebellum. The dissections of Rolando and of Mr. Solly have shewn that the anterior pyramids are also connected with the cerebellum.

It is well known that the anterior roots of the spinal nerves, devoid of any ganglion on them, constitute their motor part—while the posterior roots, which have a ganglion, form their sensitive portion. The anterior portion of the cord has, therefore, motor powers, and the posterior portion of the cord has sensitive. The precise line of demarcation between the columns for motion and sensation, has not been ascertained.

Looking at the spinal cord and nerves as engaged only in the function of sensation and of voluntary motion, the motor fibres of nervous matter may be said to arise in the encephalon, to pass down and compose the anterior column of the cord, to issue from it under the form of the anterior roots of the nerve, and then, constituting *its* motor portion, to be finally distributed in the muscular tissue. The sensitive fibres, on the contrary, take their rise on the surface or in the texture where sensation is, pass back to the cord, before entering which they present a ganglion, and on entering which they constitute the posterior roots of the nerve, and finally, in the posterior portion of the cord, they proceed to their destination, the encephalon. The circle is complete. The encephalon receives sensation from the surface through the sensitive fibres of the nerve, and it transmits the mandate and the power of contraction to the mobile organ by the motor fibres.

This arrangement is one for voluntary motion, and for voluntary motion only. The power is exclusively situated in the encephalon—the cord, like the nerves is a mere medium of transmission. There are reasons for believing that the cord has a degree of independent power, and for supposing that that power is the result of the combination of grey and of white matter in its structure. In order to bring this subject before our readers, we will introduce Mr. Mayo.

"The dependence of the spinal cord upon the enkephalon is not exactly of the same nature with the dependence of the nerves upon the cord. The spinal nerves arise—that is, begin or end—in the spinal marrow, and have no power independently of their connexion and continuity with it. The spinal cord in the same way is a production of the enkephalon, and has no part in consciousness but when in continuity with it: still it possesses forces which are not derived from

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the enkephalon. The spinal cord with the spinal nerves forms thirty-one separate organs; each organ consisting of a segment of the grey and white matter of the spinal cord, and the pair of nerves originating in it. Each of these organs in one sense is independent of all the rest; one of the sentient nerves belonging to it being irritated, the impression which it conveys to the segment of the cord in which it rises is capable of exciting there an impulse to motion, which is transmitted by the voluntary nerve to the muscles. Each of these thirty-one organs is to its corresponding segment of the body, the organ of sensation, volition, and the commonest instinct. It is true that the white fibres which communicate with the enkephalon, carry upwards the impressions of sensation, and bring downwards the cerebral impulses either of deliberate design or passion. But the organs below are already perfect to the extent assigned to them, although incapable of ministering to consciousness, unless when continuous with the enkephalon. Accordingly, in some cases of privation of sense of motion in the legs through disease affecting the middle of the spinal cord, I have seen so much independent power remain in them, that pricking or tickling the foot, which yet excited no sensation, and was unknown to the patient, was nevertheless followed by its retraction." 154.

Facts of this description have been evolved by Dr. Marshall Hall into an elaborate and ingenious theory—that of what he terms the reflex function of the spinal cord and the medulla oblongata. On a previous occasion, we alluded to Dr. Hall's hypothesis—on the present, we may present a short, but accurate sketch of it.

After enumerating the nerves of sense and voluntary motion, which own the cerebrum as their centre, he proceeds:—

"A peculiar set of nerves constitute, with the true spinal marrow as their *axis*, the second subdivision of the nervous system. As those of the former subdivision were distinguished into sentient and voluntary, these may be distinguished into the *excitor* and *motory*. The first, or the excitor nerves, pursue their course principally from *internal* surfaces, characterized by peculiar excitabilities, *to* the true medulla oblongata and spinalis; the second, or the motor nerves, pursue a reflex course *from* that medulla to muscles having peculiar actions concerned principally in ingestion and egestion. The motions connected with the former, or cerebral subdivision, are sometimes, nay, frequently, *spontaneous:* those connected with the true spinal are, I believe, *always excited.*" 14.

In the true medulla, the centre of *this* system, he includes the tubercula quadrigemina and the medulla oblongata. The excitor nerves he enumerates, as the fifth, the pneumogastric, and the posterior spinal nerves—the reflex or motor nerves connected with those excitors, he pronounces to be the fourth—the sixth—the seventh (the portio dura)—the pneumogastric—the spinal accessory—the phrenic—the inferior external respiratory (of Bell)—the spinal nerves.

The physiological doctrine founded on the preceding anatomical classification, or rather on which the classification depends, is introduced by the details of two experiments.

1. A horse was struck with the poll-axe over the anterior lobes of the brain. It fell instantly, as if struck with a thunderbolt; it was convulsed, and then remained motionless. It shortly began to breathe, and continued to breathe freely by the diaphragm.

When lacerated or pricked by a sharp or pointed instrument, as a *pin* or a *nail*, on any part of the face or surface of the body, it was totally motionless, manifesting no evidence of sensation or volition.

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When, on the other hand, the *eyelash* was touched with a *straw*, the eyelid was forcibly closed by the action of the *orbicularis*. When the cornea was touched, the eye-ball revolved outward by the action of the *abducens*. When the verge of the anus was touched, the *sphincter* contracted forcibly, the tail was raised, the vulva was drawn towards the anus.

The upper part of the medulla oblongata was now destroyed by an instrument passed through the orifice made by the poll-axe: there were violent convulsions; the respiration ceased, and the eye-lid and eye-ball remained motionless on the application of stimuli.

2. The second experiment we may suppose to be performed by the lecturer before his class. A frog, not a horse, is the subject of it.

"You observe, says Dr. Hall this living frog: its sentient and voluntary functions are obvious. I divide the spinal marrow, below the occiput, with these scissors: all is still. There is not a trace of *spontaneous* motion. The animal would remain in this very form and position, without change, until *all* signs of vitality were extinct. But now I pinch a toe with the forceps. You see how both posterior extremities are moved. All is now still again; there is no spontaneous motion, no *sign of pain* from the wound made in the neck. It is without sensibility—without volition; the *power* to move remains—the *will* is extinct. I now pinch the integument. You observe the result—the immediate recurrence of excitomotory phenomena.

I now destroy the whole spinal marrow with this probe. It is in vain that I pinch the toes; the animal, the limbs are motionless!

Could the former *excited* motions be those of irritability? I will try the truth of this suggestion by seeing whether, now that the axis of the excito-motory system is destroyed, with its phenomena, the application of a slight galvanic shock will prove the subsistence of irritability. You see how instantaneously and forcibly the muscles are stimulated to contraction." 19.

Dr. Hall observes that the distinction between the motions of the "excito-motory system" and those of volition, on the one hand, and between them and those of irritability on the other, are perfectly distinct. The former conclusion may be readily admitted—the latter is surrounded with more obscurity and difficulty. Of course, supposing the experiment quite accurate, it is clear that what is denominated irritability remains after the medulla is destroyed; but the exact distinctions between irritability, and what we may christen "excito-motility," are perhaps uncertain. But to proceed.

Dr. Hall remarks that perception, a mental phenomenon, results from impressions derived from the senses—that volition is a subsequent mental act—that voluntary motion may ensue—and thus that the motions which flow from sensation always imply volition. Now it appears to us that exception may be taken to this unconditional proposition. The contractility of the iris is, if not dependent on, at least associated with, the sensibility of the retina. Dr. Hall does not admit either the optic nerve or the third nerve into his excito-motory system. The adaptation of the eye to near and to remote objects is not, apparently, voluntary, yet is probably dependent on muscular action. We must suppose the action of the muscles of the internal ear, to be regulated by impressions made on the acoustic nerve, yet, so far as we know, their action is not voluntary. To speak strictly, then, we do not think it proved that "the motions which result from sensation *always* imply volition."

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3. The motions which belong to the excito-motory system, are never spontaneous, but always excited, the result of the application of an appropriate stimulus. The influence of that stimulus is carried along an excitor and incident nerve to that medulla oblongata, or medulla spinalis, and reflected thence along other reflex or motor nerves. Thus the incident excitor nerves, the medulla, and the reflex motor nerves, constitute the system.

"They remain, as I have already stated, after the centre of the cerebral system has been removed by experiment, or destroyed by disease. Their distribution takes place principally about the larynx and pharynx, in connexion with the medulla oblongata; and about the sphincters, in connexion with the lower part of the spinal marrow; and hence they especially guard the *orifices* and *exits* of the animal frame. Other parts of the system govern the acts of *ingestion*,—deglutition, and respiration;—and the acts of *excretion*,—of the fæces, urine, and semen. A third portion of the system gives general tone to the muscular egestion, and consequeatly to the limbs." 21.

4. Proceeding to details, Dr. Hall observes:—

"Filaments of the fifth pair of nerves are the excitors distributed upon the border of the eye-lid and surface of the eye-ball,—upon the nostrils,—probably upon the fauces,—certainly upon the face,—and are the *first* agents in inducing closure of the eye-lid, sneezing, vomiting, and sobbing, when the eye-lash is touched, the nostrils stimulated, the fauces irritated, or cold water is dashed upon the face. Other, motor, nerves convey the reflex influence from the medulla oblongata to the orbicularis, and the various respiratory muscles whose actions are combined to the acts of sneezing, vomiting, and sobbing.

Filaments of the pneumo-gastric are the excitors, when carbonic acid gas, or a drop of water comes into contact with the larynx,—when the dust of ipecacuanha is inhaled into the bronchia with the effect of inducing asthma,—in deglutition,—in ordinary respiration,—and in the act of vomiting produced by antimony in the stomach, and calculi in the gall-duct or ureter." 23.

Dr. Hall mentions one or two circumstances, not unworthy of attention. If, for example, the fifth nerve in the fauces be irritated, vomiting is induced; if, on the contrary, the eighth in the pharynx be excited, the act of swallowing follows. It has happened, that when a patient has wished to excite vomiting by tickling the *fauces* with a feather, he has, by passing it into the *pharynx*, induced such an action of the muscles of deglutition, as has drawn it into the œsophagus. A similar event has occurred with respect to the female catheter. Certain nerves being excited on introducing this instrument, an action of the muscles has been induced, which has drawn the catheter out of the fingers of the surgeon into the bladder.

5. Dr. Hall applies his theory to the function of respiration.

"In reference to respiration, several facts render it probable, although distinct experiments are required to render it certain, that the act of ordinary inspiration is *excited* by the contact of a certain proportion of carbonic acid with the filaments of the pneumo-gastric nerve in the lungs: Dr. Faraday particularly mentions the fact, that the respiration can be suspended longer after repeated deep inspirations, by which the air of the lungs is completely renewed, than in ordinary circumstances; in Hook's celebrated experiment, a stream of atmospheric air was driven through the trachea, the lungs, and incisions made through the pleura in a living dog: the animal made no effort to inspire whilst this stream was continuous, but, when it was interrupted, the efforts of inspiration

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were violent and convulsive. In this manner we may understand the *impossibility* of suspending the respiration beyond a certain period. In this manner we understand why an animal dies convulsed from submersion under water if the pneumo-gastric nerves be entire, but without convulsions if they be divided." *24.*

Legallois, M. Flourens, Sir Charles Bell, have considered the acts of respiration as spontaneous, and the medulla oblongata as their source and primum mobile. Dr. Hall makes respiration but a part of his excito-motory system, and the excitory nerves he enumerates as principally filaments of the fifth, the pneumo-gastric, and the spinal nerves. The pneumo-gastric combines the action of the different muscles together, into acts of respiration, &c. in addition to its being one of the excitors of these actions.

The respiration, like all the functions of the excito-motory class, is a mixed function, that is, may be voluntary or excited. When both the pneumo-gastric nerves have been divided it is cerebral—when the cerebrum is removed, it is excito-motory—when both the cerebral and excito-motory influences have been subtracted, it is annihilated.

6. Deglutition is an excited act. The presence of some substance to be swallowed, some stimulus, excites it. It also may be voluntary, but it is curious, that it is impossible to perform the act of swallowing three or four times in rapid succession without taking something into the mouth. Dr. Hall explains this by saying that the absence of an excitant annuls the act, which, if it take place at all, must be an excited act. To us, however, it appears that the explanation must be rather sought in the physical construction of the pharynx, and in the fatigue of attempting to contract a tube several times in quick succession, without giving it any thing to contract on. We do not experience the same difficulty in other parts of the "excito-motory system," for instance, in the endeavour to wink very often and with great rapidity. As deglutition is the associated action of many muscles, it must of course be proportionately difficult.

"I must now mention another fact. The whole *tone* of the muscular system is the result of an excito-motory function. The limbs of an animal, or of a part of an animal separated from the influence of the cerebrum, become relaxed on destroying the spinal marrow. If we remove the tail and the rectum from a recently decapitated turtle, the sphincter retains its circular form, the tail its firmness,—phenomena which cease entirely on withdrawing the portion of spinal marrow remaining within the caudal spinal canal." 26.

Dr. Hall here relates some experiments upon the turtle, detailed in a paper published in the Transactions of the Royal Society, for 1833.

A turtle was decapitated by means of a knife, which divided the second or third vertebra.

"The head being placed upon the table for observation, it was first remarked that the mouth opened and shut, and that the submaxillary integuments descended and ascended, alternately, from time to time, replacing the acts of respiration. I touched the eye or eye-lid with a probe. It was immediately closed: the other eye closed simultaneously. I then touched the nostril with a probe. The mouth was immediately opened widely, and the submaxillary membranes descended. This effect was especially induced on touching the nasal fringes situated just within the anterior part of the maxilla. I passed the probe up the trachea and touched the larynx. This was immediately followed by a forcible

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convulsive contraction of the muscles annexed to it. Having made and repeated these observations, I gently withdrew the medulla and brain. All the phenomena ceased from that moment. The eye, the nostrils, the larynx, were stimulated, but no movement followed.

The next observations were made upon the other parts of the animal. The limbs, the tail, were stimulated by a pointed instrument or a lighted taper. They were immediately moved with rapidity. The sphincter was perfectly circular and closed; it was contracted still more forcibly on the application of a stimulus. The limbs and the tail possessed a certain degree of firmness or tone, recoiled on being drawn from their position, and moved with energy on the application of the stimulus. On withdrawing the spinal marrow gently out of its canal, all these phenomena ceased. The limbs were no longer obedient to stimuli, and became perfectly flaccid, having lost all their resilience. The sphincter lost its circular form and its contracted state, becoming lax, flaccid, and shapeless. The tail was flaccid, and unmoved on the application of stimuli." 27.

These phenomena subsist in distinct portions of the medulla. Thus, if the lower extremities and tail be separated together, they will, when stimulated, answer to those stimuli in the manner mentioned. Dr. Hall has found that similar movements of the limbs are excited by pinching the lateral nerves, as they leave the spine, continuously, by the forceps. The influence of this stimulus is not only *reflected* upon the limbs, but it is *retrograde* in its course, passing from a nerve proceeding from the middle part of the spine, *forwards* to the anterior, as well as backwards to the posterior extremities. This experiment seems to Dr. Hall to present us with the simplest type of some spasmodic diseases, especially of the traumatic tetanus. From other experiments upon the frog, he has ascertained that the extreme filaments of the excitor nerves are more impressible by stimuli, than the same nerves in their course. This is what we might anticipate.

Leaving the excito-motory system, Dr. Hall advances to the third division of the nervous system, the ganglionic. The novelty in his notice of this system attaches itself to his suggestion respecting the office of the ganglia on the fifth, and on the posterior roots of the spinal nerves. Why have those nerves ganglia? It is true that they have been proved to be endowed with sensation. But it does not therefore follow that sensation is the only endowment that they have, *if* sensation be the gift of the ganglion. The following is Dr. Hall's reply to the question, and we cannot conscientiously consider it a conclusive one.

"There is," says he, "an internal nerve* for formation, nutrition, secretion, &c. 2. This nerve is ganglionic. 3. There are external organs and structures requiring nutrition, &c. 4. There are also external ganglionic nerves. The inference is plain, that these constitute the external ganglionic sub-system. The fifth especially abounds with ganglia.

It is true that the semilunar and external spinal ganglia differ in appearance from the ganglia of the sympathetic, as Sir Charles Bell has well displayed. What is the nature of this difference? To this question I find no reply in authors. It is plain, however, that the difference consists in their being, alone, *plexic*. The internal ganglionic nerve is purely nutrient: its ganglia are simple. The external involve sentient, and I believe excitory, nerves, with the nutrient; they combine, therefore, the appearances of the plexus and of the ganglion.

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* The sympathetic.

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I must add another argument upon this point. If the sensation of the face be lost by paralysis, arising from disease of the *brain*, the eye is safe; but if the same event occur from compression or destruction of the *fifth, within* the cranium, by disease, or in an experiment, the eye ceases to be nourished, and becomes destroyed! In the former case the nerve of sensation merely has suffered; in the latter the nerve of nutrition, as well as sensation, has been involved in the disease or injury." 31.

Such is the theory of Dr. Marshall Hall—such the nature of that "reflex function of the spinal marrow and medulla oblongata," which he has introduced with much pains and much talent to the notice of the profession, and, we may add, of the scientific public.

It must be owned, that there are few objections even to its details; to its essential principles, none. It must be owned, that the facts which it embraces, it explains; and, while it explains, it gives them increased interest. If, then, it be true that all this is absolutely new to us—if the development of these ingenious views be the work of Dr. Hall, and of him only, he must be allowed to take his stand in the first rank of the physiologists of the day, a not contemptible distinction.

But these physiologists are by no means remarkable for brotherly love. The "abandonnement de soi," which has ever been the boast of abstract philosophy, is not usually a prominent trait in its votaries. The maitre de philosophie in the bourgeois gentilhomme, is the representative of the equanimity of his order, and infames, scelerats, coquins, are forms of argument, which do not seem to be inconsistent with the pursuit of truth.

In the last edition of Mr. Mayo's Physiology, we observe a note upon the Reflex Theory, which certainly is not calculated, and, perhaps, was not intended to be highly complimentary to Dr. Hall. Mr. Mayo vindicates as his own property, the spirit of the theory in question, and leaves to Dr. Hall the equivocal merit, of supporting *his* views by two poor experiments. It would be unjust to either gentleman not to give insertion to this note, and its brevity supports our sense of right. Here it is.

"Under the name of 'reflex function of the spinal cord,' Dr. M. Hall has investigated a principle, which was explicitly laid down in my Anatomical Commentaries, *published in* 1823 [Part II, page 138], in the following words:—

'An influence may be propagated from the sentient nerves of a part to their correspondent nerves of motion, *through the intervention of that part alone of the nervous centre to which they are mutually attached.* Thus in vertebral animals, in which alone the fact is questionable, when the spinal cord has been divided in two places, an injury of the skin of either region is followed by a distinct muscular action in that part. Again: if the brain is quickly removed from the head of a pigeon, leaving only the crura cerebri, together with the tubercles and the second and third nerves, on pinching the second nerve, the iris contracts.'

The same view and the same facts, carefully distinguished from the agency of sensation and volition, have been put forward in the former editions (as in the present) of my Outlines of Physiology.

The facts, which Dr. M. Hall has added to the knowledge existing on this subject long before he wrote, are, that after the spinal cord of a turtle has been divided, its sphincter ani continues to act; and that in a frog made tetanic by strychnine, division of the cord, in the back and in the neck, leaves each part tetanic.

These facts, valuable in themselves, are likewise good exemplifications of the principle above laid down. But their excellence, as examples, does not authorize

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Dr. M. Hall *to affirm, in* 1833, that the independent power of the spinal cord 'had never been accurately distinguished from sensation and volition;' which he asserts in a paper in the Philosophical Transactions for that year, wherein he claims that distinction, and the principle it involves, as a discovery."

This note wears the livery of polemical philosophy, and is perhaps the commencement of that species of compliment, which experimenters on the nervous system liberally lavish on each other. But however that may be, it fortunately does not devolve on us to decide the respective merits of the parties, or to enter on a discussion of priorities and dates. Possibly *that* might strip both gentlemen of any great claim to originality, and shew that *some* of the facts had been established, previously to the publications of either. We have neither the wish nor the leisure to engage in disputes of this description, and shall take the respective merits of the parties pretty nearly at their own valuation.

But we must admit, in fairness to Dr. Hall, that granting Mr. Mayo all that he claims as exclusively his own, much praise is still due to the former gentleman. Mr. Mayo stated in an unimpressive manner, what was little more than a simple fact. Dr. Hall has evolved it into an extensive and ingenious theory, applied it to the solution of complex phenomena previously surrounded with obscurity, and has done a great deal towards clearing the way to a precise acquaintance with the functions of the nervous system. Such appears to us to be the meed which even a parsimonious critic must award to Dr. Hall. Mr. Mayo has done much towards the improvement of physiology, and he can afford to share his honours with his peers.

II. INJURIES OF THE SPINAL CORD.

Our text is now the paper of Sir Benjamin Brodie, contained in the recently published volume of the Royal Medico-Chirurgical Society's Transactions. This paper is characterised, like all others, from the same source, by its conciseness, its inductive character, and the evidence it offers of being essentially founded on actual observation and experience.

Sir Benjamin remarks, that there is a lack of precise and positive information in pathological and surgical works, respecting the effects of injuries of the spine. The comparative difficulties of cadaveric examination have tended, no doubt, to occasion this. Our author presents his paper to the Society, with the view of contributing his share towards the removal of so serious a defect in surgical literature.

A. WOUNDS OF THE SPINE.

On this part of the subject Sir Benjamin has nothing new to offer. Such wounds are usually fatal at an early period. He refers to Ollivier's Treatise on the Diseases of the Spinal Cord, for a notice of some experiments illustrating the effects of these injuries on animals, and for the histories of some cases, in which they occurred in man.

Mr. Mayo, in his Outlines of Pathology, quotes two instances of recovery after wounds of the spine.

Case. A young man was struck on the back of the neck with a poniard,

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three fingers' breadth below the left ear, the wound penetrating obliquely towards the right. Immediate loss of sense and motion of the whole body ensued, the head alone feeling. During the first few days, there was retention of urine and constipation; afterwards, involuntary discharge of urine. Towards the eighteenth day, feeling began to return on the left side; on the twentieth, the patient could move the digits of the left hand and foot; and feeling and motion of the left side increased daily. On the thirtieth day, feeling began to re-appear on the right side; shortly after, motion. In three months he was so recovered that he could walk a little; the left side, however, having kept in advance of the right.—*Morgagni.*

Case 2. A drummer of the National Guard of Paris was struck on the back of the neck with the point of a sabre, which was thrown at him: his limbs bent under him, and he fell. The left arm was palsied. This effect was permanent. The left leg was likewise affected with weakness: but this disappeared on the fourth day. On the thirteenth day it was accidentally discovered that the right side of the body, from the fourth rib downwards, had lost its feeling: this anæsthesia was permanent.—*Boyer.*

Before we proceed to the examination of other injuries of the spine, we may return for a moment to the functions of the spinal marrow. It is certain, in the first place, that it is an organ of transmission, and by distinct fasciculi, appropriated to sensation and volition, conveys an impression from its nerves to the brain, and the mandate of the will from the brain to the nerves. In the second place, each segment of the cord forms with its nerves a sort of circle in itself, sensitive fibrillæ going to it, motor fibrillæ going from it. The functions which result from this arrangement are the "reflex," and exist independently of communication with the encephalon. Finally, the cord must exercise an influence upon nutrition, although its amount is not well ascertained.

The following are the logical consequences deducible from the premises set down.

1. If those fibres, by which the cord conveys sensation to the encephalon are rendered, by disease or accident, unable to perform their functions, the parts of the body supplied by spinal nerves, whose origin is below the seat of lesion, will no longer *feel*. The affection is designated anæsthesia.

2. If those fibres which convey volition from the brain are alone affected, then voluntary motion only is lost.

3. If both sets of fibres are involved, sensation and motion are destroyed.

4. If only one side of the cord is affected, one side only of the body suffers. But if both sides of the cord are implicated, both sides of the body suffer.

5. Certain fibres of transmission in the cord may escape, and those only may be diseased, which are concerned in the "reflex function" of one or more segments. The arms may be palsied, while the lower limbs still feel and are capable of voluntary motion. In such a case it is clear that the continuity of the encephalon with that part of the cord giving off the nerves of the lower extremities still holds, while that of the encephalon with the portion of the cord giving rise to the nerves of the upper extremities does not.

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B. CONCUSSION OF THE SPINAL CORD.

We may now return to Sir Benjamin Brodie. He classes the injuries to which the spine is subject, in the following order.

First. Fractures of the vertebræ without displacement of the fractured surfaces.

Secondly. Fractures with depression or displacement of bone, diminishing the diameter of the spinal canal, and occasioning pressure on the spinal cord.

Thirdly. Fractures complicated with dislocation.

Fourthly. Dislocations not complicated with fracture.

Fifthly. Extravasations of blood on the surface of the membranes of the spinal cord. Such extravasations, however, rarely take place to any considerable extent, and bear no comparison to those which occur within the cavity of the cranium in consequence of a rupture of the substance of the brain, or a laceration of the middle meningeal artery.

Sixthly. A narrow clot of extravasated blood is sometimes discovered within the substance of the spinal cord. It is always of a very small size, but from its peculiar situation may be productive of the most dangerous symptoms.

Seventhly. Laceration of the spinal cord and its membranes. Of course it is more easy to conceive than to describe all the varieties of this kind of injury, which are met with in practice. The spinal cord may be separated through its whole substance; or it may be torn in one part and not in another. M. Ollivier describes a case in which the attachments of the nerves on one side were destroyed, while those on the other side were entire.

Eighthly. The minute organization of the spinal cord may suffer from a blow inflicted on the spine, even where there is neither fracture nor dislocation, and where the investing membranes do not appear to participate in any way in the effects of the injury.

This case is analogous to that of concussion of the brain, and it has accordingly been termed concussion of the spinal marrow. The ultimate texture of both organs is too subtle, to admit of distinct appreciation by our senses; and it cannot be a matter of surprise, if that texture should be susceptible of lesion from violence, incapable of appreciation. Whether, however, this explanation of the effects of concussion be correct or not, it is certain that the spinal marrow, like the brain, will, after severe shocks, exhibit alterations in its functions, or even absolute annihilation of them, independently of much *apparent* change of structure.

As Sir Benjamin observes, much worse consequences usually arise than from concussion of the brain; that, if the patient recovers, his recovery is more tedious: that if he dies, greater changes in the condition of the injured part are detected on dissection. But these differences in the effects of the injury are easily explained. The brain and its membranes completely occupy the cavity of the cranium, while the spinal cord and its membranes occupy only a part of the vertebral canal: and this being the case, it requires no great knowledge of mechanics to enable us to understand why the same degree of violence applied to the head, and spine, should occasion different degrees of mischief to the organs which they contain.

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The symptoms of concussion of the spinal marrow exhibit a wide range. From the most trivial impairment of sensation or of motion, they extend to complete suspension of its functions, and to destruction of the individual.

Mr. Mayo writes, that, in a case given by Boyer, complete paraplegia had been instantaneously produced by a fall into a ditch: the patient died. On dissection, no disease could be discovered either in the head or spinal canal. Frank mentions four fatal cases of concussion of the spine, on the post-mortem inspection of which no change in the spinal marrow was detected, or injury of the vertebral column.

Mr. Mayo relates the particulars of a case of a less fatal character. We give it as illustrative of the more ordinary consequences of concussion.

Case. A man, aged 50, was admitted between four and five years ago into the Middlesex Hospital, having fallen out of a loft into a stable, in such a manner as to pitch upon the juncture of his neck and back. He did not lose his senses, but on being lifted up, his arms and legs were found to be numb and powerless. In a few days he recovered the feeling and use of his legs; the numbness and weakness likewise gradually left the arms; but his hands remained affected, and continue so still. The hands are numb and weak; the thumbs and fingers are drawn inwards, and are incapable of complete extension. The treatment employed was cupping, blistering on the neck, and calomel. About six months after the accident, strychnine was used, but without advantage.

At an uncertain period after the accident, at least in those cases, which, proving fatal, admit of an examination, the central part of the cord, Sir Benjamin Brodie assures us, is found to be softer than natural, and its fibrous appearance is lost in that of a semi-fluid substance. If the patient survives for a longer period, the alteration of structure is perceptible in the whole diameter of the cord, and occupies from one to two inches, or even more, of its length; and at a still later period it has often proceeded so far as to determine in its complete dissolution. This softening is the common consequence of the injuries of the spine, and the ordinary cause of the dangerous symptoms which succeed them. It is regarded by some pathologists as the result of inflammatory action, but Sir Benjamin doubts, for the following reasons, the accuracy of that conclusion.

"1st. A minute examination of the injured part of the spinal cord will often enable us to detect the commencement of the softening process at a very early period, before sufficient time had elapsed for inflammation to become established, and before any symptoms of inflammation had shewn themselves. 2dly. The softened part of the cord, in the first instance, exhibits no appearance of increased vascularity. 3dly. Even where the softening process is so far advanced as to occasion complete disorganization of the spinal cord, the investing membranes, for the most part, exhibit their natural appearance, there being neither increased vascularity, nor the slightest effusion of lymph, or serum, or pus on their surface. 4thly. The symptoms, which mark the progress of these changes, are (as I shall shew hereafter) merely a combination of those which the concussion of the spinal cord has occasioned in the first instance, and which of course must have been wholly unconnected with inflammation." 125.

It is very true, that this disorganization never proceeds far, without enlargement of the small vessels, in other words, an inflammatory state

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ensuing. But Sir Benjamin regards this as the consequence of the lesion, not its cause, and he draws a comparison between the lesion itself and idiopathic ramollissement, which there are strong reasons for considering not essentially inflammatory.

The question is one of much difficulty as well as interest, and probably it is insusceptible of positive determination. The preceding arguments are strong, yet it may be urged in opposition to them: 1, *that*, in the worst, or in very severe cases of *mere* concussion, whether of the brain or spinal marrow, no lesion whatever has been found: 2, *that*, softening of the cord may be said to be consecutive to the injury, and although it is discoverable at an early period, yet low inflammatory action may be set up at a very early period too: 3, *that*, softening is a progressive alteration, tending to increase in intensity and in extent with length of time; such progressive lesions are more readily accounted for, by supposing them to depend on processes of an inflammatory character than on the contrary: 4, *that*, a violent injury to an important organ, adequately supplied with blood, is likely to give rise to inflammation of its structure: 5, *that*, softening of the spinal marrow is sometimes a sequela of decided inflammation. Take for example, the following case extracted by Mr. Mayo, from Ollivier's book. A gentleman, who was liable to epilepsy, complained of uneasiness of the throat, with difficulty of swallowing, accompanied by acute pain in the neck and occiput, followed by fever, embarrassed breathing, and vomiting; he then was seized with numbness of the left hand, which speedily extended up the arm: the right was immediately after affected in the same manner, and on the following day they were both paralytic. The legs were not in the least affected, nor the functions of the bladder or bowels. He died on the eighth day, having preserved his intellects to the last. *Inspection.*—There was extensive softening of the upper part of the cord, chiefly of the grey matter, which was of a rose colour, with a highly vascular state of the membranes. 6, *that*, softening after injury, is occasionally attended with unequivocal inflammation of the spinal membranes: 7, *that*, the treatment which usually succeeds best, is such as would be calculated to relieve inflammatory action, for example, local or cautious general depletion, counter irritation, and mercury: 8, *that*, the argument drawn from the idiopathic softening of the brain is open to some degree of objection, as circumstances differ in many respects in the two affections; 9, and finally, *that* the absence of unnatural vascularity after death, would disprove, it is true, the prior existence of an active state of inflammation, but is not conclusive evidence of there having been none.

A candid consideration of what may be urged upon both sides of the question, will probably give rise to the conviction, that it is still open to accurate investigation. Our knowledge of the phenomena of inflammation of nervous matter is less exact, than it is in respect to many of the other tissues of the body. Experiments and injections might assist in elucidating points of this description, and indeed we may remark that less attention has been directed to what we may term pathological experiments than they deserve.

C. SYMPTOMS DEPENDENT ON INJURIES OF THE CORD.

Sir Benjamin introduces the examination of these, by an attempt to clas-

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sify them. The immediate symptoms, he says, admit of being referred, 1st, to concussion of the spinal cord; 2dly, to laceration or division of its substance; 3dly, to pressure made on it either by displacement of bone or extravasated blood. If inflammation of the membranes of the cord take place, other, and a secondary order of symptoms ensue. Taking a general view of them, they are observed to vary, 1st, according to the part of the spinal cord on which the injury has been inflicted: 2dly, according to the kind and degree of injury which the cord has sustained; 3dly, accordingly, as from accidental circumstances, that is from circumstances of which we cannot take cognizance, the life of the patient is prolonged for a shorter or longer period, or ultimately preserved.

Our author gives an account of the several symptoms in succession, and afterwards offers some general observations, with the view of connecting and completing their history.

1. *Paralysis of the Voluntary Muscles.* This is an obvious and intelligible effect of injury of the spinal cord. Its extent varies with the amount of that injury. If the spinal cord should be divided through its whole substance, or extensively lacerated, or subjected to any considerable degree of pressure, the paralysis is immediate and complete. If the injury be partial, certain muscles may be paralysed, while others retain their power of voluntary motion.

"Concussion of the spinal cord," continues our author, "often produces complete paralysis also; but more frequently the paralysis arising from it is partial. One limb may be paralytic and another not so; or in the same limb certain muscles may be thus affected, while others are still obedient to the will. In some cases the patient has the power of using his limbs while he is in the horizontal posture, yet he is unable to stand erect. Or the degree of paralysis may vary at different periods. Thus it may be complete at first; then, after three or four days, the power of motion may be in some degree restored; then it may be lost again. Sometimes, although the paralysis is complete, or nearly complete, in the first instance, so speedy a recovery takes place, that the patient is able to walk in the course of three or four weeks, or even sooner; or the converse of this may happen, so that, although there is no more than a weakness of the muscles immediately after the accident, complete paralysis may take place, sometimes gradually, at other times almost suddenly, after the lapse of several weeks." 130.

Paralysis of the lower limbs is more common than that of the upper. In some cases, in which the injury has affected the spinal cord in the lower part of the neck, the lower limbs are rendered paralytic, while there is either no paralysis, or a less degree of paralysis in the upper limbs. The explanation is not difficult, indeed it has been given in some preceding observations. But in caries of the spine the case is usually reversed. In *that* the upper limbs are frequently paralytic for some time before the lower. May not this depend on implication of the nerves of the upper limbs at their roots, or at their passage through the intervertebral foramina? The causes of paralysis in this complaint extend to the cord from without.

"A case is recorded by Mr. Stafford, in which there was paralysis of both the upper and the lower limbs, consequent on an injury of the loins, with fracture and displacement of the lumbar vertebræ; and another case fell under my own observation, in which paralysis of the upper limbs followed a contusion of the middle dorsal vertebræ. I conclude that such cases are no more than ap-

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parent exceptions to the general rule, of the paralysis being confined to the parts which are below the injured portion of the spinal cord, It is easy to suppose that the bones may be fractured or displaced in the loins or back, or that blood may be extravasated within the theca vertebralis in one or the other of these situations, while another part of the spinal cord, as high as the origin of the nerves which form the axillary plexus, suffers from the effects of concussion." 131.

Paralysis after an injury of the spine is always dangerous. Yet many persons recover. A gentleman was thrown from his horse, and received a severe blow on his back. Five weeks afterwards he became paralytic in his lower limbs; but at the expiration of fifteen or sixteen weeks more, he began to recover the use of them, and he was able to walk with the assistance of a stick, when Sir B. Brodie was consulted, about a year afterwards. If the paralysis is the result of the pressure of extravasated blood, it may be relieved by the absorption of the coagulum—if, of lesion of the cord, that lesion may be reparable.

Cases still more remarkable are on record. The cord is said to have been completely divided, without the occurrence of paralysis then or afterwards. In the present state of our knowledge on this subject, perhaps, a little incredulity is advisable.

2. *Muscular Spasms.* "A gentleman, in October 1827, was thrown from his horse, which afterwards rolled over him. His head was not struck, and the principal injury seemed to have fallen on the lower part of the spine. Soon after the fall, and while he was yet lying on the ground, his thighs were raised spontaneously towards the trunk, and this was followed by an involuntary tremulous motion of the lower limbs. Afterwards the lower limbs became paralytic, and continued in that state for a period of two months. At the end of that time he began to recover, and when I was consulted, about a year after the accident, he was able to walk without even the assistance of a stick.

In the observations on injuries of the brain which I formerly communicated to this Society,* I mentioned some circumstances which seem to show that the convulsions which occasionally occur at an early period after a severe blow on the head, are the consequence of a slight extravasation of blood, which is sufficient to operate as a cause of irritation, without actually destroying the functions of the brain. Whether the convulsions which took place in this instance had a similar origin, or arose from that disorganization of the spinal cord which is the most usual cause of paralysis after concussion, must be left to future observations to determine. The same symptoms sometimes occur at a later period. For example: a man, forty-five years of age, in January 1825, fell from a scaffold, and received a blow on his back. All the parts below the epigastrium became immediately paralysed. At the end of nine days it was observed, for the first time, that a slight involuntary action of the muscles of the thighs was induced when pressure was made accidentally on these parts. Afterwards severe cramps and painful convulsions took place, whenever pressure was made on any part of the body, or even by lifting up the bed-clothes. At last they were almost constant, so as continually to awaken him from his sleep. When he died, nine weeks after the accident, it was ascertained that there had been a fracture of the fourth dorsal vertebra, with such a degree of displacement as to produce a slight degree of pressure on the spinal cord. There was an abscess,

* Medico-Chirurgical Transactions, Vol. XIV. p. 370.

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containing from four to six ounces of pus, communicating with the fracture, and extending into the posterior mediastinum. The membranes of the spinal cord and the spinal cord itself, presented a natural appearance externally, but on the latter being divided longitudinally, the central part of it was found to be in a softened state, so that on being macerated for a short time in water, it almost completely disappeared." 134.

Sir Benjamin relates another case, in which there were fracture and considerable displacement of the third and fourth lumbar vertebræ, attended with paralysis of the lower limbs. An attempt at reduction was attended with a partial degree of success. At the end of a month he became affected with slight involuntary motions of the lower limbs, and at the same time he began to recover the power of moving them voluntarily. At the expiration of four months from his admission he left the hospital, and Sir Benjamin has heard no more of him.

" In each of the two last-mentioned cases there was some degree of pressure on the spinal cord; and I am the more inclined to believe that this was the cause of the spasmodic affection of the muscles, as I have not met with any case in which it was proved by dissection, that this symptom existed in combination with disorganization of the cord, and independently of pressure on it." 155.

It appears to us that there are some reasons for imagining that organic alterations of the cord, may, as well as pressure, give rise to these affections of the muscles. Analogy seems to be in favour of the supposition. A short time ago we attended, with Mr. Skegg of St. Martin's Place, a young man who was suddenly attacked with apoplectic insensibility, hemiplegia on the right side, and severe spasms of the muscles of the left. At the end of thirty-six hours, or thereabouts, he died. On dissection, we found the left optic thalamus so softened that it formed a mere pulp. There was no other appreciable alteration of the brain.

Setting aside any analogical considerations, there appear to be facts connected with the diseases of the cord itself, which give a degree of probability to the supposition that spasms of the muscles may depend on disorganization of the medulla.

Case. In a case described by Dr. Abercrombie, the progress of the disease was slow, and lasted from October to the July following: the symptoms being coldness and numbness of the feet, with diminished power of motion: after several weeks, complete palsy of the legs, and inability to empty the bladder; tightness across the abdomen; spasms like opisthotonos. In the intermediate April, some amendment occurred, with the power of moving the legs when supported by crutches. Two days before death, the right arm became paralytic, and his speech impaired. The loss of sensation was never complete.

Inspection.—The whole cord was of a pale rose colour, and was in every part entirely diffluent. The medulla oblongata was softened on its anterior part, as well as the adjacent portion of the annular protuberance.

Affections of the Nerves of Sensation.

If, says Sir Benjamin, the spinal cord be lacerated, or subjected to any considerable degree of pressure, the sensibility of the parts below the seat of the injury is totally destroyed. If the injury be in the situation of the sixth

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or seventh cervical vertebræ, the destruction of sensibility is frequently partial in the upper extremities, while it is complete in the trunk and lower extremities; but if it correspond with the two vertebræ immediately above these, the patient, during the short remaining period of his life, presents the extraordinary phenomenon of a living head, with its sensibility and muscular powers unimpaired, attached to a trunk and extremities of the existence of which he is totally unconscious.

In cases of concussion of the spinal cord, there are the same varieties with respect to the destruction of sensibility, as there are with respect to that of voluntary motion. It may be complete, incomplete, partially complete. Sometimes the skin appears insensible, while the patient is conscious of pressure made on the more deeply seated parts.

"Not unfrequently, unusual sensations are referred to parts, the nerves of which are actually incapable of conveying to the sensorium the impressions made by mechanical pressure, or the application of heat. Sometimes the patient complains that he feels as if he had been everywhere severely bruised; or he has a sense of burning, or of tightness and constriction. In many instances, the destruction of sensibility is incomplete at first, but becomes complete afterwards, as the process of softening makes progress in the injured portion of the spinal cord. Where recovery takes place, the restoration of sensibility usually precedes that of the power of voluntary motion; so that the patient may be quite sensible of external impressions, while he is still incapable of employing his muscles for any useful purpose. The last observations apply equally to all cases, whether the spinal cord has suffered from concussion, or from the pressure of displaced vertebræ." 136.

Affection of the Respiration.

If the cord be lacerated or divided above the origin of the phrenic nerves, inspiration can no longer take place, and the animal dies instantly. Artificial respiration prolongs life for a few hours. Pressure on the superior portion of the spinal cord, in consequence of dislocation or fracture, is attended with a similar result. Destruction of the transverse ligament, allowing the odontoid process of the axis to press forward on the cord, has in several instances suddenly killed the patient. But this is not universally the case. A remarkable instance of this description is contained in the present volume of the Society's Transactions. It was presented to the Society by Mr. Phillips, and we shall introduce it here.

Case. In the Summer of 1827, William Cross, an agricultural labourer, was standing on a hay-rick, when he slipped off it, and fell to the ground head foremost, the occiput coming in contact with the soil. He was "stunned" by the fall, but was soon able to walk a distance of half a mile to the parish surgeon, by whom he was bled and purged. On the following day he felt scarcely any inconvenience from the accident, and in two days more he proceeded about his usual business. He now laboured under nothing but a "stiff neck."

Between three weeks and a month after the accident he was first seen by Mr. Benjamin Phillips. On that day the patient had walked two miles. Mr. Phillips examined the back of his neck. A small tumor was apparent immediately over the second cervical vertebra; pressure on it occasioned very little pain; nor was there any other lesion of sensation or of motion.

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Mr. Phillips concluded that the disease was chronic scrofulous inflammation of the first or second vertebra, or both, and enjoined rest, leeches, and caustic issues. Between four and five months after Mr. Phillips first saw him, the following circumstances were observed.

"I noticed, what may have existed for some time before, a *thickness* of the voice, such as is produced by enlarged tonsils. I looked into the throat, and discovered that the tonsils were very large, but they did not afford any decided indication of recent disease. In a few days after I had discovered the change in the character of the voice, he complained of a little inconvenience in swallowing. I then carefully examined the throat, and discovered a slight projection or fulness at the back of the pharynx, as near as may be at the level of the body of the second cervical vertebra. It appeared to me that this circumstance was perfectly reconcilable with my diagnosis, and I concluded that an enlargement of the body of the axis had been produced, and that the interference with phonation and deglutition was so caused." 81.

Soon after this he had an attack of pleurisy, for which he was bled, and by which he was much debilitated. About nine months after the accident, anasarca came on, and in the forty-seventh week after the accident he died of hydrothorax. Up to the last week of his life, he was accustomed to walk to the water-closet, which was on the same floor with his bed, and was never assisted in taking food, even though lying on his back; and no evidence was ever afforded to those around him, that motion or sensation, with the exception already mentioned, was in the slightest degree impaired; nor had the difficulty of swallowing materially increased.

Dissection. All Mr. Phillips could obtain was permission to examine the back of the neck. He discovered that,—

"The condyles of the occiput still rested upon the articulating surfaces of the atlas, but the atlas was found to be, not a separate and independent vertebra, but an appendix to the axis. So much of its anterior portion, as includes the surfaces by which it is articulated with the occiput and with the axis, had been violently separated from the posterior portion of its ring, and had been carried in an oblique direction, downwards and forwards, until it arrived upon the same plane, but anterior to the axis, to the body and transverse processes of which it became attached by perfect bony union, whilst the posterior fragment had suffered no displacement.

Under these circumstances, the bone presented two spinal foramina, and four transverse, but no odontoid process. This organ having been fractured and separated no organ passed through the anterior spinal foramen." 83.

Mr. Phillips remarks:—

"In the present case, not only was there fracture and great displacement of the atlas, but a fracture and displacement of the processus dentatus, without any material disturbance of the functions of the economy. The blow was received upon the postero-superior surface of the occiput, the impetus was directed obliquely downwards and forwards in the course of a line, drawn from that point, as nearly as may be through the occipito-atloidal articulation. A portion of this ring of the atlas, immediately posterior to the articulating surfaces, is comparatively unsupported; this portion gave way, and the anterior portion was propelled downwards and forwards, between the axis and the pharynx, the posterior portion remaining as nearly as may be in situ.

The body of the atlas being thus displaced, one of two things was necessary, either that the odontoid process should be fractured, or that the transverse liga-

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ment by which it is attached to the atlas should be ruptured; in this case the former contingency obtained, and to this circumstance the patient owed his life." 84.

It does not appear that the medulla was compressed, although its direction must have been altered. The case certainly tends to shew, that severe injuries may be inflicted on this part of the spinal column, without lesion of the cord—and that the rule laid down by authors, "that a fracture of the processus proves instantly fatal, while a fracture of the cervical vertebræ (above the third), with considerable displacement, is almost immediately fatal," must be received with some degree of reservation.

We now return to Sir Benjamin Brodie. He relates a case, in which caries of the cervical vertebræ in a child proved fatal. The child died with symptoms resembling those of hydrocephalus. On examining the body, the ventricles of the brain were found to be much distended with fluid. The transverse ligament of the second cervical vertebra had given way, and the odontoid process formed a considerable projection into the spinal canal. The dura mater however was entire, and prevented the dislocation being so complete as it would have been otherwise. The pressure on the spinal cord was not sufficient to destroy its functions, although it might well be supposed to have operated as a cause of irritation, so as to produce the effusion into the ventricles of the brain. A boy, aged sixteen, died in the hospital under very similar circumstances.

When the cord is seriously injured below the origin of the phrenic nerve, and above that of the intercostal nerves, inspiration is performed only by the diaphragm, and expiration by the pressure of the viscera assisting the relaxation of that muscle, by the elasticity of the thoracic parietes, and by the elastic resilience of the lungs. Such respiration we may well imagine to be exceedingly imperfect. We observe that the patient is incapable of expectorating mucus if it be collected in the trachea: that, if he coughs, the cough is peculiar, being effected by a forcible inspiration, followed by a sudden relaxation of the diaphragm; and that if he be placed in the sitting posture, so that the pressure of the abdominal viscera is removed from the diaphragm, he breathes with much greater difficulty than when he is lying down. Recoveries in such cases are very rare. The patient seldom survives beyond the sixth day, and more frequently dies within forty-eight hours.

As these symptoms depend not simply on the situation of the fracture, but on the amount of lesion of the cord, they must obviously be regulated by that amount. In the first instance, the cord may not have been much hurt, and the symptoms may come on with its subsequent disorganization. In one case which occurred to our author, there was a fracture of the seventh cervical vertebra, followed by a softening and dissolution of the spinal cord; the difficulty of respiration did not take place until the twelfth day; but death occurred in less than three days afterwards.

Of course, the lower down in the back the injury inflicted on the cord, the less the interference with the respiratory function. Wherever, says our author, the injury is situated, a disposition to cough, with a copious expectoration, is likely to occur some time after the accident. In one case, in which there was a fracture of the eleventh dorsal vertebra, with softening of the spinal cord in the same situation, these symptoms began as early as the

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third day; and such was the disposition to cough, that it was induced by any slight change of position. Nevertheless this patient survived until the end of the fifth week.

It does not appear that in these cases of injury of the spine, the expired air has been submitted to chemical examination. It would not be uninteresting to ascertain if the changes occasioned by respiration in the air and blood, continue as before. It is not likely that there should be any material difference, as we must presume the consequences of the lesion of the cord to be simply the imperfection of the mechanical act of expansion and contraction of the thorax. After tying the pneumo gastric nerves, the arterialization of the blood is greatly impaired.

Priapism. "This is a very common symptom of injury of the spinal cord, and it is remarkable that, although under ordinary circumstances the erection of the penis is the result of an impression communicated from the sensorium, I have never known it to occur, in these cases, except in combination with paralysis. Priapism may take place whether the patient suffers from the effects of simple concussion of the spinal cord, or from those of pressure. It seems to be connected with injuries of the upper, rather than with those of the lower portion of the cord: at least, I am not aware that I have met with it where the seat of the injury has been below the sixth dorsal vertebra. It is for the most part an early symptom, shewing itself in the course of the second or third day, and it seldom continues after the first fortnight. It occurs even where the sensibility of the parts is totally destroyed, and may be induced by the mechanical irritation caused by the introduction of the catheter, where the patient is entirely unconscious of the operation. This circumstance was pointed out to me many years ago by Professor Macartney, of Trinity College, Dublin; and I have had many opportunities of verifying the correctness of the observation." 141.

The occurrence of priapism after the total abolition of sensation and of voluntary motion in the neighbouring parts, is a good instance of the contiuuance of the "reflex function," after the communication with the encephalon has been destroyed. In the state of health, priapism may result either from an impression of which the sensorium is conscious, or from one upon the nerves of the genito-urinary system, of which it is not conscious. Instances of the latter are not unfrequent. Irritation of the rectum, of the neck of the bladder, the introduction of an instrument, will occasion priapism almost without the consciousness, certainly against the will of the individual. The erections that occur in sleep, are frequently unattended with consciousness, and, resulting as they usually do, from fulness of the generative system, must depend essentially on the operation of the reflex function of the medulla.

Affections of the Urinary Organs.

These are extremely important, on two accounts—first, because they tend to abridge the patient's life; secondly, because they require the assistance of the surgeon.

Paralysis of the lower half of the body is attended with an inability to void the urine. Sometimes the patient is conscious in some degree of the retention—sometimes he is not at all so. If the catheter is not employed, the urine flows involuntarily, as in other cases of over-distended bladder. At other times, the urine dribbles away, although the bladder is contracted. Retention of urine is an early symptom—continues to the last in fatal

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cases—and, where recovery takes place, disappears earlier than the palsy of the limbs. The following account of the changes which occur in the urine, and in the urinary organs, is too concise to be condensed, and too valuable to be omitted. Long as the extract is, we give it with pleasure.

"The first effect of a severe injury of the spinal cord is not unfrequently to occasion a marked diminution in the quantity of urine secreted. This is most observable where the injury is in the lower part of the neck, and where, in consequence, the function of respiration is very much impaired. Thus, in a patient in St. George's Hospital, in whom there was a forcible separation of the fifth and sixth cervical vertebræ, complicated with fracture and depression of bone, and laceration of the spinal cord, four ounces of urine were drawn off by the catheter at the end of twenty-four hours after the occurrence of the accident, and when he died at the end of twenty-six hours more, the same quantity was found in the bladder, none having been voided in the intermediate time. The same thing, however, may occur when the injury is in the lower part of the spine. For example: a gentleman received a blow on the loins, which occasioned, in the first instance, a partial paralysis of the muscles of the lower extremities. He never experienced any difficulty in voiding the urine, but the secretion was almost entirely, if not entirely, suspended during the first twenty-four hours. I did not see this patient at the time, but I cannot doubt the accuracy of the report which he made when I was consulted some time afterwards.

In some cases, the urine which is first secreted after the occurrence of the accident, although of an acid quality, and free from mucus, has a peculiarly offensive and disgusting odour. In other cases the urine is highly acid, having an opaque yellow appearance, and it deposits a yellow amorphous sediment. In one case this colouring matter was in such abundance that it was found after death to have imparted a yellow tint to the mucous membrane of the bladder, which at the same time bore no marks of inflammation, even exhibiting less appearance of vascularity than under ordinary circumstances.

But the most common change produced in the urine by an injury of the spinal cord is the following. It is voided of an ammoniacal odour, and turbid; when allowed to cool and remain at rest, it deposits a large quantity of adhesive mucus, and when tested with reddened litmus or turmeric paper, it is found to be highly alkaline. After some time a quantity of white matter (phosphate of lime) may be detected in the mucus, and it is tinged with blood. At a still later period a considerable quantity of coagulum of blood is blended with the mucus and urine. These appearances very commonly shew themselves as early as the second or third day after the occurrence of the accident; sometimes not before the end of a week, or even eight or nine days. I have not observed that injury of one part of the spine is more liable to produce them than injury of another. There is a great variety as to the period of their duration. In fatal cases they sometimes continue to the last, even though the patient should survive for several weeks, or even months; at other times they continue for two or three weeks, then subside, and the urine remains transparent, and of an acid quality afterwards. In other cases the quality of the urine varies almost from day to day, without any manifest reason for the change. It may be alkaline, depositing adhesive mucus; then clear and acid; then alkaline again; and these alterations may take place several times in the progress of the same case.

It is well known to pathologists that such adhesive mucus as is here described is never a constituent part of the urine as it is secreted by the kidneys, but that it is furnished by the mucous membrane of the bladder and ureters, especially of the former, when in a state of inflammation. The effect therefore of an injury of the spine is, in many instances, to occasion inflammation of the mucous membrane lining the urinary organs; and the consequences of such inflammation, where the urine has continued alkaline and loaded with mucus up to the

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time of the patient's death, are very manifest on dissection. The mucous membranes of the bladder, ureters, pelvis, and infundibula of the kidneys, is highly vascular; and in some cases the bladder is lined with phosphate of lime, which the mucus has deposited on its surface. Occasionally spots of extravasated blood are found in the glandular substance of the kidneys, and loose masses of coagulum in the pelvis of the kidneys and in the bladder.

An interesting question here presents itself, whether the inflammation of the mucous membrane of the bladder be a primary or a secondary disease? Whether the injury of the spinal cord operates directly on the mucous membrane, or whether its first effect is to alter the quality of the urine, as it is formed by the kidneys, the mucous membrane becoming affected afterwards, in consequence of the irritation excited in it by the contact of an unhealthy and stimulating secretion? These points remain to be determined by future observations." 145.

Affections of the Digestive Organs.

In the first instance, whatever be the seat of the injury in the spinal cord, the bowels are torpid, so that they cannot be made to act except under the influence of the most powerful purgatives. Then the abdomen becomes tympanitic; and in fatal cases, however protracted, these symptoms generally continue in a greater or less degree to the last. The fæces are passed without the patient's consciousness. In many cases in which the injury is in the cervical portion of the spinal cord, and death takes place in the course of two or three days, there is a disposition to vomit. In one case which fell under Sir Benjamin's observation there was incessant vomiting of a large quantity of dark-coloured fluid: in another case, in which the patient died on the fifth day, during the two days which preceded his dissolution there was a perpetual gulping, and ejection of a similar diseased secretion.

In more protracted cases the alvine evacuations are of a black colour; semi-fluid, somewhat resembling tar or treacle in their appearance, and of a peculiar and offensive odour.

"It has not been ascertained," continues Sir Benjamin, "as far as I know, what is the nature of the substance on which this dark colour depends. It certainly is not mere extravasated blood. Probably it is furnished by the secreting vessels of the stomach and intestines, and corresponds to the dark-coloured matter which is sometimes vomited at the termination of typhus fever, or to the black sordes which, under the same circumstances, are attached to the gums and teeth. It is only within the last two or three years that my attention has been directed to the subject, and further observations are required for its elucidation." 146.

Gangrene.

The disposition to gangrene in the parts below the seat of injury is well known. It is evidently the result of the diminished nervous influence. In many cases, in which the injury has affected the cervical portion of the cord, sloughs begin to be formed, not only on the sacrum and nates, but even on the ankles, as early as the second day. When the injury is in the dorsal part of the cord, the sloughs are generally, but not always, confined to those parts on which the pressure is greatest.

Affection of the Sensorium.

"I have seldom," says Sir Benjamin, "observed the sensorium to be materially affected, except where the injury was in the cervical portion of the spinal cord, and here the results are very different in different cases.

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Thus, in one patient, in whom there was a fracture of the fifth and sixth cervical vertebræ, with displacement of bone and laceration of the spinal cord, the functions of the sensorium were in no degree disturbed, the patient being perfectly conscious and talking rationally. Another patient, in whom the same part of the cord was bruised and lacerated, became comatose soon after the accident. On some blood being taken from the arm, the coma subsided; but at the end of twelve hours he became again comatose, and continued so until he died, ten hours afterwards. A third patient, in whom there was a fracture of the fourth and fifth cervical vertebræ, with softening of the spinal cord, was at first perfectly conscious and sensible. In less than twenty-four hours he fell into a state approaching to that of complete stupor; then became delirious, and continued so until he died, thirty-six hours after the accident. A fourth patient, in whom there was a small extravasation of blood in the centre of the spinal cord, opposite the fifth and sixth cervical vertebræ, died in less than forty-eight hours, having been sensible and conscious nearly to the last, but the pupils of his eyes being contracted."

Symptoms not included under the foregoing Heads.

A. The first effect of any severe injury of any portion of the cord, is a greater or less degree of collapse. Occasionally there is a rigor soon after the accident.

B. When the injury is in the lower part of the neck, the patient, our author proceeds to state, not unfrequently dies before complete re-action is established, the pulse remaining feeble to the last; or it may beat distinctly, but not oftener than fifty or sixty times in a minute. In the majority of cases, however, after the first twenty-four hours, the pulse rises to ninety-six or a hundred in a minute; but still it is feeble and contracted, indicating a state of great general debility rather than the existence of an active inflammatory disease. The appearance of the tongue corresponds to the character of the pulse; and it is not unusual at the end of twenty-four hours to find it dry and parched, covered with a brown fur, which is soon converted into a black crust, resembling what we observe in the last stage of a continued fever.

C. When the injury is in the lower part of the neck, but not such as to occasion death in the first three or four days, or where it is in the dorsal or lumbar regions, and the patient does not die early, or ultimately recovers, the pulse usually remains for a considerable time more frequent than natural, varying from ninety to one hundred and twenty beats in a minute, but feeble and contracted, the tongue at the same time becoming more clean and moist than it was in the first instance. If blood be drawn under these circumstances, the coagulum is of a large size and loose texture; often never exhibiting any inflammatory appearances whatever; sometimes having a slight buffy coat on its surface in the first instance, but none afterwards. These observations apply to the cases in which softening of the cord takes place, and offer, Sir Benjamin Brodie thinks, an additional reason for supposing its softening after injury not to be inflammatory.

D. Inflammation of the membranes of the cord is less frequent after injuries of the spine than inflammation of the membranes of the brain is, after injuries of the head. In the cases which Sir B. Brodie has seen, the inflammation of the membranes and the softening of the cord have gone on simultaneously. Superadded to the ordinary symptoms of the latter, there were

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profuse perspirations, and severe and repeated rigors, marking the occurrence of suppuration. There were also spasmodic twitches of the voluntary muscles, which our author attributes to the pressure of pus upon the cord.

In reference to this subject, we may introduce a passage from Dr. Hall. He speaks thus of the symptoms of inflammation of the membranes of the spine.

"Amongst the first symptoms of spinal *meningitis* is local *pain* in some part of the spinal column, augmented by the movements of the patient, and by percussion, but rarely, if ever, by pressure, along the spine. This pain sometimes extends along the back and limbs, in which there is then tenderness on pressure, —a symptom which may serve to distinguish meningitis from myelitis, in which there is usually loss of sensibility.

The next important symptom is spasm, or various kinds of muscular contraction. The head, the neck, or the trunk, is bent backwards; or there is trismus, torticollis, partial or complete opisthotonos, or contractions of the limbs,—constant, or recurrent, or exacerbated, in paroxysms, on moving, or being moved, &c. with extreme pain. Sometimes there are convulsions." 136.

The phenomena of tetanus and epilepsy, of the convulsions of children, of hysteria, and of chorea, would seem to shew how little organic lesion is absolutely requisite for the production of spasmodic contractions of the muscles. This remark of Sir Benjamin Brodie's should lead to a more precise investigation, than, probably, has hitherto been prosecuted, of the actual causes of spasm after spinal injuries.

E. "Sir Charles Bell has described two cases, in which inflammation and suppuration of the membrane of the spinal cord followed injuries of the spine, unconnected with softening of the cord itself, and producing symptoms a good deal similar to those which are described as taking place where these membranes are inflamed from other accidental causes. In the first of these was a fracture of the eleventh dorsal vertebra. The patient was affected with delirium, attended with a rapid pulse. The most remarkable circumstance was, that there was no loss either of sensation or of the power of voluntary motion. Death, preceded by typhoid symptoms, took place on the fifth day.

In the other case recorded by Sir Charles Bell, the injury was in the lower cervical and first dorsal vertebræ, and the whole of the spinal cord, from this part to the lower part of the loins, was found after death to be bathed in pus. There were no severe or urgent symptoms for the first eight days; then the patient was seized with violent convulsions, followed by fever and delirium. There were no paralytic symptoms until the tenth day, when there was a difficulty in raising one arm, and this was followed by complete paralysis of the lower limbs two days afterwards. Death, preceded by typhoid symptoms, took place nearly three weeks after the occurrence of the accident." 153.

Sir B. Brodie has seen no cases precisely similar to these. He relates one of some interest. A patient had fracture of the sixth dorsal vertebra, and the usual symptoms. On the tenth day gangrene commenced upon one foot, and over the os sacrum. The sloughing rapidly extended, and the greater part of one glutæus maximus came away. On dissection there was softening of the cord in the middle of the back. The sloughing had extended to that part of the spinal canal, contained in the sacrum, and lumbar vertebræ, between which and the dura mater much pus had been deposited. Between the dura mater and the arachnoid was a layer of yellow lymph, most abundant in the situation of the cauda equina, but extending as high as

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the lower dorsal vertebræ. From the latter to the middle of the back, both the cord and its membranes were free from disease.

F. A review of the consequences of injuries of the spinal cord establishes the following general conclusions; *that*, laceration, compression, or softening of the cord leads to no material difference either in symptoms or results; *that*, the great majority of the symptoms are the same, whatever the part of the cord injured; *that*, the lesion of the respiratory function must be excepted, in consequence of its being regulated by nerves coming off from a particular region, and *that*, of course, the parts immediately affected with paralysis must, for the same reason, be excepted too; *that*, a consideration of these two circumstances explains the increase of danger, in proportion as the lesion is higher in the cord.

Cases of recovery, observes Sir Benjamin, in concluding this history of the symptoms, even after what may be regarded as a severe injury of the spinal cord, are by no means uncommon. If it suffers from the effects of concussion, the recovery may be complete; the period of recovery varying from three weeks to twelve months or more. If the cord be lacerated, or much compressed by displaced bone, the patient may live, but without recovering from the paralysis. Under these circumstances, life may be prolonged for an indefinite period. A man was admitted into St. George's Hospital, in January, 1823, who had met with an injury in the preceding August, in consequence of a mass of chalk having fallen upon him while working in a chalk-pit. Mr. Hardwicke, of Epsom, being sent for, found the first lumbar projecting over the last dorsal. With some difficulty he reduced the displaced vertebra to its natural position, the reduction taking place with a jerk or snap. At the time of his being received into the hospital, he had some power of using his lower limbs while in bed, but he could neither walk nor stand, and he was unable to empty his bladder without the aid of the catheter. He remained nearly in the same state when he quitted the hospital, two months afterwards. Two or three years after that he was still alive, and without any material alteration in his symptoms.

TREATMENT OF INJURIES OF THE SPINE.

1. If a vertebra or vertebræ should be dislocated, or displaced and fractured, the first question which presents itself, is the propriety of attempting to restore it to its natural situation. Both reasoning and facts concur to recommend an attempt of the sort, if conducted with caution. When not made cautiously, we may easily conceive what consequences may ensue, and Boyer states a case in which a child died under it.

In displacement of the cervical vertebræ, the greatest care is requisite; reduction is less hazardous, and will, probably, be more successful when the lumbar are concerned.

"In proof of this assertion, I may refer to a case which I have already described, which occurred in the practice of Mr. Hardwicke, of Epsom; the patient being afterwards admitted into St. George's hospital, labouring under paralysis of the lower limbs. In another case, to which also some allusion has been already made, and which occurred under my care in St. George's hospital, there was a fracture with great displacement of the third and fourth lumbar vertebræ. When the patient had recovered from the state of collapse which had

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followed the first shock of the accident, I endeavoured, by fixing the thorax and cautiously extending the pelvis, to restore the vertebræ to their proper place. The attempt was in some degree successful, and no ill effects of any kind resulted from it." 159.

2. From the analogical instance of the fracture of the cranium, it has been proposed, in cases of fracture and depression of the arch of the vertebræ, to apply the trephine and elevate the bone. The following are the reasons of Sir Benjamin Brodie, for disapproving of the operation.

"The question respecting such an operation seems to me to lie in a very small compass. If the whole or nearly the whole of a vertebra be driven forwards, the depression of the posterior part of it will of course occasion a diminution of the size of the spinal canal; but the removal of any portion of the vertebra which is accessible to an operation, will be of little avail, as the irregularity in the anterior part of the canal, made by the displacement of the body of the vertebra, must be the same after, as it was before, the operation.

If there be simply a fracture on each side of the spinous process, with a depression of the loose or intermediate portion of bone, of course there must be a corresponding diminution of the size of the vertebral canal; but as that canal is much larger than the spinal cord, which it contains, it does not follow that the spinal cord is really compressed, or that any material diminution of the symptoms would follow the elevation of the depression.

But let it be supposed that the spinal cord is really suffering from pressure: it has been already shown, that a much less degree of violence than that which is necessary to occasion a fracture of the spine, may produce concussion, softening, and ultimately dissolution of the spinal cord, with a train of symptoms much worse than those which arise from simple pressure. Now no operation can be of the smallest advantage in this respect: but, on the contrary, if it be necessary to apply the saw in the performance of it, the jar and disturbance of the parts which this must occasion is even likely to aggravate the mischief.

If these views be correct, it is evident that the cases, in which there are any reasonable grounds for the performance of the operation, must be of very rare occurrence, and that even under the most auspicious circumstances it must be doubtful whether it may not be productive of harm rather than of good to the patient.

Nor, as far as I am acquainted with the results, do the experiments, which have been hitherto made on the subject, lead to any more satisfactory conclusion. I am not aware that in any of the cases, in which it has been hitherto performed, the operation has proved the means of preserving the patient's life, or even of relieving any of the more important symptoms." 161.

The proposal of trephining the spine, has certainly not advanced in favour with the profession, since the performance of one or two operations in the Borough Hospitals. The arguments against it may be resolved into these simple propositions:—*that* we operate in ignorance of the amount of injury inflicted on the vertebræ—*that* we are also ignorant of the amount of mischief inflicted on the cord—*that*, consequently, the operation may not be applicable to the state of the bones, nor beneficial to that of the cord—*that* the operation itself is a severe one, and if it does no good, will probably do harm. The consideration of all these circumstances, throws a great degree of doubt on the propriety of the operation, and not a small one on its safety.

The very nature of the arguments against the operation, would recommend it under certain circumstances, *supposing* ourselves equal to their

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determination. If a surgeon could be satisfied from the mode in which the injury occurred, or from any features in the case, that the injury of the bone was limited to the arch, and that the cord was sound, or, if the amount of probabilities was such as to render that conclusion highly reasonable, we suppose he would be justified in using the trephine. But to leave a question in such a state, is virtually to decide it in the negative, and we may be sure, in this instance, that the cases adapted for an operation will be very few, while the responsibility incurred by the surgeon will render those in which it is performed still fewer.

3. Absolute repose in the horizontal posture, is an item of treatment too obvious to detain us.

4. "I have show that, in some cases, an injury of the spine is followed by inflammation of the membranes of the spinal cord, and there can be no doubt that it is then necessary to take blood from the arm, and even to repeat the blood-letting several times. The state of the pulse forms a sufficient indication to the practical surgeon of the necessity of such active treatment, and the appearances of the blood after it is drawn will assist his judgment in determining to what extent it should be carried. It is, however, if my experience has not much misled me, a great mistake to suppose that blood-letting is always proper. In the majority of cases the state of the pulse is such as actually to contra-indicate the abstraction of blood, and as I have already stated, the blood when drawn does not in general present those appearances which are supposed to mark the existence of inflammation. I have no reason to believe that blood-letting arrests the process of softening and dissolution of the spinal cord, and indeed I have usually found that the symptoms which mark the existence of these changes make a more rapid progress, in proportion as a larger quantity of blood is taken away. The weak and contracted pulse, the disposition to gangrene, the alkaline quality of the urine, the black and offensive alvine evacuations, and the brown or black fur on the surface of the tongue, would, under other circumstances, be regarded as proofs of depression and debility, indicating the use of stimulants rather than of what are called antiphlogistic remedies. From all that I have seen, I cannot doubt that much harm has arisen from the indiscriminate application of the practice, which is usually proper and necessary after injuries of the head, to cases of injury of the spine." 162.

5. The torpor of the bowels, and the bad state of their secretions, conspire to demand purgatives. The addition of some stimulant, as ammonia, assafœtida, &c. to them is of service.

6. The catheter is required from the commencement. When the urine becomes alkaline, and the bladder secretes adhesive mucus, the latter should be emptied several times daily, and in some cases it is useful to wash it out with injections of warm water.

7. The treatment of the gangrene that succeeds spinal injuries is any thing but satisfactory. The prevention, as far as possible, of pressure, and the exhibition, in a judicious manner, of stimulants, is all that we can do, which is very little.

Here we part from the subject of injuries of the spine, and from Sir Benjamin Brodie. This paper, like all his others, is characterized by an exact and inductive spirit, the absence of hypothesis, and the caution so indicative both of knowledge and philosophy. It is by such papers, and by the kind of observation they are founded on, that surgery will be essentially advanced, and rendered as little an empirical art, and as much a demonstrative science, as the nature of its objects will permit.

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We must quit the pathology of the spinal cord. The lengthened analysis of Sir Benjamin Brodie's valuable paper precludes our adverting to the idiopathic diseases of the medulla and its membranes, to the consideration of which we shall return hereafter.

The works of Dr. Hodgkin and of Dr. Carswell claim what amount of space remains, and to these we shall proceed.

We gave a sketch of the contents of Dr. Hodgkin's work in the last number of this Journal. Of the twelve lectures which that work contains we noticed two. The ten remaining, are devoted to the arachnoid membrane—to the pericardium—to the pleura—to the peritoneum, tunica vaginalis, and bursæ—to parasitical animals—to adventitious serous membranes—to the general characters of malignant disease—to scirrhous and fungoid tumors—to the colours of animal tissues—and, lastly, to malignant disease in general.

II. Parasitical Animals.

We shall, probably, select the subject of malignant diseases for an article in the succeeding number of this Journal. At the present moment we will pick out the lecture on parasitical animals, because some recent observations and researches have conspired to bring them rather prominently forward.

The lecture in question is the seventh. It occupies forty pages of the work, and some powerful compression must necessarily be exerted to reduce it to the limits we are able to afford it.

Dr. Hodgkin attempts little more than a classification and a description of the parasitical animals which infest man. Of these, some classes are found imbedded in the substance of, or lodged in, internal cavities; and are never, or, at most, but rarely and accidentally, met with out of the body. They constitute the intestinal animals of Cuvier, and the entozoa of Rudolphi. Other parasitical animals support a more distinct life, and have recourse to the animal which they infest only for their supply of food, and for the deposition of their eggs or larvæ. It is for a part only of their lives that they are imbedded in, or attached to, the animal, at whose expense they subsist. The greater number of these belong to the active class of insects; but a few, as, for example, the leech, are found amongst the annelides mollusca.

The entozoa are first considered. The question of their spontaneous generation we leave untouched. Probabilities are rather against than for it. The entozoa are found in the tissues as well as in the cavities of the body. They have no distinct organs of circulation, of respiration, or of innervation, and in other respects they present great varieties in their organization.

They have been arranged under three heads: 1. The vesicular worms. 2. Flat worms. 3. Cylindrical worms. The two first, or the vesicular, and the flat, belong to Cuvier's order of parenchymatous intestinal animals, or those whose imperfect viscera penetrate and ramify through their substance, and those in which not even a trace of alimentary canal can be perceived. The cylindrical worms, on the other hand, are included in Cuvier's order of cavitaires; or those which have an intestinal canal, furnished with a mouth and anus, and floating in a distinct abdominal cavity.

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1. *Of Vesicular Worms or Hydatids.*

"The vesicular worms are possessed of a caudal bladder or vesicle, which constitutes the greater part of the animal, and on which the name of the order depends. It is of a greater or smaller size; and is either proper to one individual, or common to several. In one genus, the acephalocystis, the animal consists of nothing but this bladder. Others possess a body, which is always very small in proportion to the animal, and a head bearing some resemblance to that of the tænia, and variously armed with tentacula and sucking orifices." 183.

The vesicular worms are not very rare in man—they infest all portions of his body—interfere with his existence—and have been found at all ages, even in the fœtus. They are met with in many of the mammalia, and even in cold-blooded animals. Dr. Hodgkin agrees with those who regard all these cysts as possessed of some degree of vitality. He adopts the classification of Cloquet, Portal, and Beclard, which enumerates their genera, as 1. the Cysticercus; 2. the Polycephalus; 3. the Diceras; 4. the Echinococcus; and 5. the Acephalocystis.

A. *Cysticercus.* It has a head somewhat resembling that of the tænia; and a nearly cylindrical body, terminated by a caudal vesicle. It generally exists singly in the cyst which contains it. It is more frequently met with in the inferior animals, than in man; and is by no means rare in the livers of sheep.

It appears to exist in a specimen of human lung at Guy's Hospital. Dr. H. has seen it taken from the pia mater—and he has seen it in the cellular membrane of the thigh. Dr. Sharpey says that cysticerci are not very uncommon in some parts of Germany.

The cysticerci of different animals differ in their form and proportion: those in man have, generally, the neck about equal to the diameter of the vesicle, from which it proceeds with a gradual diminution in size. They are frequently found in the liver, and even in the brain of sheep. The trephine has been successfully employed in these animals.

"The enclosing cyst in which the cysticerci are lodged, whether derived from cellular membrane alone or from a serous membrane in conjunction with the cellular, is generally thin; but when, in consequence of the death and contraction of the cysticercus, the enclosing cyst is allowed also to contract, it may acquire considerable thickness, and a dense structure. This is very conspicuous in the livers of sheep, in which the whole sac sometimes acquires a bony character. The death and contraction of the cysticercus constitute the process by which a natural cure is effected." 186.

Passing over the genera Polycephalus, Diceras, and Echinococcus, we stop at the Acephalocyst.

B. *Acephalocystis.* This is far the most frequently found in man. Hydatids of this kind are enclosed in a cyst which is apparently derived from the cellular tissue of the surrounding parts; but acquires a dense and almost semicartilaginous structure, in which bony matter is sometimes deposited. This cyst, in some very rare cases, is said to have been absent, an assertion of which our author seems doubtful. We shall present his account of the structure and character of the acephalocysts, as it is concise and pretty complete.

The proper hydatid cysts, which have a lamellar structure, and in con-

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sistence bear a great resemblance to coagulated white of egg, have not the slightest connexion with the enclosing cyst; and between them, there is generally a thin and unequal layer of a dirty, yellow, semi-concrete substance, which may possibly be an excrementitious secretion from the hydatid itself. The proper cyst is filled with a fluid; which, though generally clear and limpid, is sometimes turbid and discoloured. On the whole, this fluid contains a very minute quantity of animal matter.

Though a large acephalocyst is sometimes solitary, more frequently it contains a number of smaller cysts, which may themselves hold others smaller still.

" The young hydatids appear to be produced from different parts of the parent cyst; to which they are described, by authors, as being found attached, sometimes on the inside, and sometimes on the outside. For my own part, I have never known an acephalocyst to produce smaller ones, except from its internal surface; and to this I have not seen them attached, except when of almost microscopic size. Whilst scarcely a few hundredths of an inch in diameter, they may be seen in great numbers, perfectly detached, in the fluid of the parent; and neither then, nor when of larger size, have I been able to discover the least trace of neck, or other attachment, to the superior cyst. On the inner surface of the latter there are frequently seen numerous elevations, variously disposed, and differing both in form and magnitude, but generally minute. The opaque white spots affecting the hydatid membrane are not confined to the internal surface: they are occasionally found upon the external surface. I have seen them half or two-thirds of an inch in diameter, of a circular figure, with an irregular surface, something like that of a cauliflower. It is well to be acquainted with the appearance of these spots; since it may happen that an hydatid tumor may be spontaneously evacuated by a communication with some part of the alimentary canal, and the dead membranes may become so much altered as to be scarcely recognizable whilst coming away in fragments. Yet should one of these fragments possess one or more of these elevations, it is so characteristic, as to remove all doubt respecting the nature of the case. These inequalities have been supposed to depend on nascent hydatids; and the differences which they present have been assumed to be the characteristics of three species of acephalocystis. I am satisfied that many of these elevations are morbid growths from the parent cyst; and others of them possibly point out the spots whence the young have already been detached. I am not however prepared to affirm that none of these elevations are attributable to nascent hydatids. In a case examined by Francis Sibson, jun. and myself, numerous transparent spherical granules were seen in the parietes of a parent hydatid acephalocyst: they were, in all probability, nascent young ones, and appeared to throw some light on the mode of production. They were situated much nearer to the internal than the external surface; and, although a few of them were of a larger size than some of the small, perfectly-formed, detached hydatids which in other cases I have seen within the interior of the parent, in this instance there were none which had become detached. I imagine that the separation or retention of these little bodies may in some degree depend upon the nature of the internal surface of the parent. If this internal surface be formed by an extremely thin membrane, or by a scarcely concrete substance, they may become detached almost as soon as formed; but if the internal surface be composed of a firm membrane, or some tenacious substance, they may be retained, as in the instance last referred to, and even acquire the semblance of a peduncular connexion amongst themselves or with the parent cyst." 189.

The junior cysts are similar in structure to the parent, and are usually

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spherical. But Dr. Hodgkin has seen them present an hour-glass contraction, and, on one occasion, opaque white lines, which, after pursuing a straight course, bifurcated once or twice at similar angles.

"Some of the secondary acephalocysts are slightly milky or opaline: others are perfectly transparent, and capable of answering completely the purpose of a lens. They occasionally appear to have been produced at different times, or to have advanced with different degrees of rapidity. By the united effect of the growth of these cysts, the parent cyst is finally burst, and dies.

Amongst a collection of hydatids, it is by no means uncommon to find some which appear to have lost their vitality, and to have become collapsed, more or less opaque, and of a yellowish colour. These parasitical animals are supposed to enjoy but a short period of life. The hydatids of pigs and sheep are said to be produced in spring, and to die the following winter. It is certain, however, that in man, either the continued life of individual hydatids, or a succession of generations, will protract, not merely the existence, but the growth of hydatid tumors to a much longer period." 190.

Dr. Hodgkin relates a case corroborative of many of the preceding observations. He does not think that the mere existence of a solitary cyst affords a sufficient basis for separating it from the social one.

An interesting, but not a very promising part of the inquiry into the history of acephalocysts, relates to the possibility of removing them. Nature does so in two ways: 1st, By forming a communication between the cyst containing the hydatids, and either the surface of the body, or the intestinal canal, or some other cavity, as, for example, the urinary passages, by which they may be evacuated. Or, 2dly, the animal dies: its fluid is absorbed; and its membrane is folded and shut up, as an inert foreign body, within the outer cyst which contracts upon it. The ossification of the cyst, thought by some to be a natural mode of effecting the death of the hydatid, is looked on by Dr. Hodgkin as a result of it, a more probable opinion. In the liver, he believes the bile to be employed by nature for effecting the death of the acephalocyst. In this, we conceive, the doctor is rather confounding an accidental circumstance with a natural intention. If a parasitical animal is developed in an organ, the secretion of which is poisonous to it, and, if in the usual changes of the tissues which a foreign body occasions, the secretion does arrive at it, that must be looked on as a mere contingency, not a special effort of the natural powers. There is very little more intention in this mode of killing the parasite, than if it tumbled into a jar of aquafortis.

In some cases hydatid tumors have been cut into, and their contents thus got rid of. The extraction of the containing cyst is an important element in the cure.

"I have heard that some remarkable cases of abdominal tumor dependent on hydatids have been successfully treated by Dr. Recamier, one of the physicians at the Hôtel Dieu. From symptoms, with which I am not acquainted, he was induced very confidently to diagnose the existence of hydatids; and he steadily persevered in directing the repeated application of caustic, until the sac was opened, and the acephalocysts allowed to escape. Hydatids have been evacuated, and the patient cured, under the influence of a saline purgative: and Laennec, having noticed that sheep affected with vertigo dependent upon hydatids of the genus cysticercus are cured by feeding in salt marshes, has been led to recommend baths and fomentations containing a solution of muriate of soda, in cases in which the presence of hydatids has been known or suspected. He

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supports his views by the detail of several successful cases; yet the efficacy of this mode of treatment must so much depend on cutaneous absorption and transudation through the subjacent tissues, that, notwithstanding my veneration for the author, I cannot but be sceptical with regard to it. The diffusible nature and the anthelmintic virtues of turpentine, and of Deppel's oil, might entitle them to a trial, both internally and externally. It might also be made the subject of experiment on inferior animals affected with hydatids, how far the simple acu-puncture, or the more powerful electro-puncture, might succeed in procuring the death of the hydatids, and the cure of the affected animals without the expulsion of the cysts." 196.

An operation for the evacuation of the contents of a hydatid tumor should only be attempted under favourable circumstances. Dr. Hodgkin has seen two cases, where, after the death of the hydatids, and condensation of the inclosing cyst, inflammation and suppuration have occurred in the surrounding tissues, and fatal consequences have ensued. In both cases the liver was the seat of the disease.

2. *Of Flat Worms.*

The most remarkable of these are the bothriocephalus and the tæniæ. We need not enter upon their description. The following circumstances connected with the tape-worm are not unworthy of attention.

"I believe," says our author, "that few persons are aware of the remarkable appearance which the tænia assumes in its most contracted state. I had no idea of it myself, until I received an interesting communication on the subject from Dr. Barlow of Bath. He informed me, in a letter dated the 25th of 10th month (October) 1830, that, about a year before, after his usual visit to the United Bath Hospital, he was about to leave the establishment, when one of the nurses hastened to shew him a worm which had just been passed in a stool by a patient affected with acute rheumatism: it was about five inches long, of a dark colour, and marked by numerous rings. Not recognising any thing which he had ever before seen, he directed it to be set aside, until he had an opportunity to examine it. It was, in his presence, put into one of the porringers used for bleeding, together with a little water to prevent its becoming dry; and then committed to the care of the apothecary's assistant. The next day, on calling for the porringer, he was not a little astonished to find, instead of his acquaintance of the preceding day, a large mass of unfolded tape-worm, of considerable length, white, flat, jointed, and in every respect such as patients affected with tænia so often present to their medical attendants after the successful exhibition of a vermifuge. Though the Doctor was not aware that he had ever met with a description of the tænia in the state in which the one just mentioned was shewn to him, he supposed that it might have been described by elminthologists; but had sought in vain for such a description, when he sent his account to me. He was therefore induced to believe that the living tape-worm possesses the form and characters of the worm just described, as it was first seen; that its evolution is consequent on the death of the animal; and that naturalists generally have been led into error, by taking their accounts from the worm when dead, in which state it is almost always seen." 199.

Dr. Hodgkin, however, is for several reasons inclined to conclude that both the contracted and elongated states are natural to the tape-worm, and not post-mortem phenomena. The tæniæ appear to prevail in certain districts. They infested our troops stationed in and near the Cape.

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3. *Of Cylindrical Worms.*

These possess a higher organization than the preceding. They have an abdominal cavity, an intestinal canal, a mouth and anus, and distinct sexual organs.

The genera to which our author adverts are the ascaris, the oxyuris, the trichocephalus, the filaria, and the strongylus.

Of the *ascarides* one species only is met with in man. The ascaris lumbricoides, or the lumbricus, as it is vulgarly called, is found, without any manifest difference, in man, the horse, the ass, the zebra, the quagga, the ox, and the pig. Generally speaking, it would appear that the size of these worms bears some relation to that of the individual in whom they are found. They sometimes exist in very great numbers. Dr. Hodgkin saw between fifty and sixty in the small intestines of a boy who died in La Charité of fever.

The ascarides lumbricoides are usually met with in the small intestines. At times, however, they are either carried or make their way into the large intestines, and are voided with the stools. At other times, in opposition to the peristaltic action of the intestines, they gain the stomach; and have even been known to make their exit from the mouth or nostrils. Instances are more rare in which these worms have escaped from the body by preternatural openings.

Sometimes the presence of these worms is not characterized by any definite symptoms. At others, there is the usual evidence of irritation of the intestinal canal. They are attended with an abundant secretion of unhealthy mucus, which is often thick, viscid, and opaque, and something like thick milk. "Broussais," says our author, "lays particular stress on the necessity which there is for a morbid, and, as he believes, an inflammatory state of the intestinal mucous membrane, as an essential condition in the propagation of intestinal worms. I have heard him, in his Lectures, interdict anthelmintics; and order that the gastro-enteritis should be treated, as the worms would be unable to exist in the healthy mucus!"

The *oxyuris vermicularis*, formerly termed ascaris vermicularis, particularly infests children, not unfrequently adults, is present in great numbers, and has its usual residence in the large intestine, especially the rectum. It occasions itching and irritation at the anus, sometimes about the neck of the bladder, and has been said to give rise to satyriasis. Leaving the intestinal canal, it may visit the pudendum, or even quit one person for another. Oxyures infest rabbits, mice, and horses.

The *trichocephalus*, or, as it was erroneously termed, *trichuris*, is a round worm, about two inches in length, a variety of which is found in man. On the Continent, it would appear to be the worm most commonly met with in the human intestines. The large intestines, more particularly the appendix vermiformis of the cæcum, are their usual habitation.

The *filariæ* are another family of round worm, by more than one species of which man is infested. They have a long, slender, thread-like body, pierced before by a round mouth. They are principally met with in cavities which do not communicate externally—in the cellular membrane, in the substance of the muscles, and in the parenchymatous structure of the viscera. The most remarkable is the filaria medinensis, or guinea-worm, of which, from its celebrity, we need say nothing.

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"Another species of filaria has been described as occurring solitarily in the lungs of persons labouring under phthisis, and is called the filaria bronchialis; or, by Treutler, who has given the principal description of it, the hamularia lymphatica; or, by Rudolphi, the hamularia subcompressa. It is an extremely rare worm; and, by some, the existence of such a species is doubted. However rare or doubtful the existence of filariæ may be in the lungs of man, worms, probably belonging to this family, are occasionally found, in great numbers, in the lungs of some of the inferior animals. I have seen very many of them in the lungs of two specimens of boa or python which died in this country. The lungs were at the same time very much affected with tubercles." 209.

Occasionally, though rarely, some other kinds of round worms are met with in man. Of these, the strongylus gigas is the most remarkable. It is described as the largest of all the intestinal worms; and is said to be two or three feet, or even more, in length, and as thick as one's little finger. The most frequent seat of its development is one or other of the kidneys, though it has been found in other organs. It is met with in different animals, as the dog, the wolf, the marten, and, at times, in man. When found, it is coiled up, distending the organ in which it is situated, and occasioning the destruction of its glandular structure. Strongyli of this species, but of small size, have sometimes passed off by the urethra. Mr. Lawrence has related in the Medico-Chirurgical Transactions the case of a female who voided, from time to time, many hundreds of small worms from the urinary bladder. It is not quite clear whether these were strongyli, or a new species which have been designated spiroptera hominis. The horse is subject to a species of strongylus, called equinus, which, penetrating to the arteries, causes aneurysm. We believe that the abdominal aorta is peculiarly subject to this kind of aneurysm.

"A small species of parasitical animals has lately been discovered affecting the muscles of voluntary motion, amongst the fibres of which they have been found generally dispersed over the body. They consist of very minute cysts, of an oblong figure, in size and colour bearing considerable resemblance to the young of pediculi attached to the hair of persons of dirty habits. When examined with a lens, these little cysts are seen, in many instances, not to be perfectly ovoid, but to be irregularly contracted towards one extremity, so as to form a sort of short and imperfect neck. It is also not uncommon to find some opacity towards one or both of the extremities. They are placed in the direction of the fibres; and are lodged in the cellular membrane immediately investing the muscular fibrillæ, or the tendinous fibres to which they are attached. When the specimen is sufficiently recent, one, and sometimes two thread-like worms may be discovered coiled up in each of the cysts. This little worm was first seen by that indefatigable and talented naturalist Richard Owen, who has minutely and carefully examined it, and who regards it as somewhat allied to the eels found in paste and vinegar. He has given it the name of trichina spiralis." 211.

The cysts were discovered and described before the worms that they contain were distinguished. The trichina appears to be confined to the muscles of voluntary motion, and to the tendinous fibres connected with them. In a case in which Dr. Hodgkin found them in all the voluntary muscles, even in the lumbricales of the foot, they stopped at the lower constrictor of the pharynx, and were not discoverable in the œsophagus, nor in any of the involuntary muscles.

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No symptoms indicative of the presence of trichinæ have been hitherto made out. The cysts may become ossified, or earthy, probably when the worm has died and become invisible, for in such cysts Mr. Owen has not found the worm. In other cases, however, from some other causes, it has not been discovered.

"I must not quit the subject of entozoa without noticing the microscopic and very remarkable animalcules discovered in semen. They have been particularly investigated by Prevost and Dumas; who state, that they are to be found in the semen of all animals capable of propagation, but that they are absent in that of the mule, and that of other animals who may be sterile from age or season of the year. Very slight differences are noticed in the seminal animalcules of different species; but they all agree in having slightly oblong and flattened heads, with lengthened tails, tapering so as to become nearly or quite invisible with the best glasses: they possess active powers of motion, and are evidently endowed with sensation. No trace of organization has yet been discovered in them, probably on account of their extreme minuteness. Whether essential to generation or not, they may be regarded as the parasites of the tubuli seminiferi. They are called *circoria seminis*, by Richard Owen, who classed them with the trichina." 213.

Many feigned complaints have been referred to parasitical worms, and it is necessary that medical men should become acquainted with their natural history and character. That must be done by a reference to the works of elminthologists. We have not, therefore, entered into those characters, or that history here, as their description would be prolix if complete, and almost useless if partial. We have given a sort of resumé of the parasitical worms of man, and we must refer the curious reader for more circumstantial information to the proper sources.

Of the *Parasitic Insects* it is requisite to speak. The most prominent are the various species of pediculi, or lice—the pediculus corporis—pediculis capitis—and pediculus pubis;—the pulex irritans, or flea; the cimex lectuarius, or bug; the pulex penetrans, an American insect, which makes its way under the skin of the hands and feet, deposits its eggs there, and produces troublesome tumors; several species of acarus, as the acarus scabiei, or itch insect.

Dr. Hodgkin concludes the lecture by an examination of the obscure, indeed mysterious mode, in which parasitical animals are developed in the tissues where they are found.

That some spring from ova accidentally or designedly introduced into the body of the animal they infest, cannot be doubted. The œstrus equi, for example, deposits her eggs about the knees and shoulders of the horse, where they may be within reach of his tongue. The beast is thus the means of introducing the parasite into his own system.

But it is not so clear how the entozoa are generated in the tissues where they are found. Where proof is wanting, fancy is active, and conjecture does not hesitate to advance her claims. It has been supposed, *that* the entozoa may exist in other situations, under different appearances, their forms being changed when they become parasitic—*that* they are the result of equivocal or spontaneous generation—*that* some of the classes of parasitic animals, for instance the hydatid, are really not possessed of a separate vitality at all—*that* they *are* animals propagated by germs of invisible minuteness, which pervade and are received with our air and food.

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It must be confessed, that there is something to be said for, and much against each of these hypotheses. The present state of our information on the subject does not warrant a positive opinion any way, and we dismiss an inquiry which can lead to no satisfactory results.

We turn to Dr. Carswell. The fasciculus of his work which lies before us, is occupied with the consideration of the:—

III. Analogous Tissues.

Such is the name given to all solid morbid products, which resemble the natural elementary tissues of the body. Including bloodvessel under the name of vascular tissue, they are the following:—Vascular, including erectile—cellular, including fat—serous—mucous—cutaneous—cuticular, including hair and nails—fibrous—fibro-cartilaginous—cartilaginous—osseous.

1. *Origin of Analogous Tissues.*—The most frequent source of them is the spontaneously coagulable part of the blood, or the fibrine. To the tissues which have their origin in this, the terms *analogous, accidental, adventitious,* or *pseudo-formations* is applied. Another and a different source of these tissues, is the conversion of the primary or existing elementary tissues into them. Thus cartilage is converted into bone, the cellular into serous or fibrous tissue, and so on. The tissues so resulting, are called *analogous transformations.*

Analogous formations and transformations admit each of a sub-division. The analogous formations may originate either in the coagulable part of the blood, independently of inflammation; or in the coagulable lymph which is a product of that state. The analogous transformations may be the consequence of the conversion of a tissue of a lower into one of a higher grade, or the reverse. The change of cellular into serous tissue offers an example of the first sort of transformation, which is designated the *ascending* series—that of osseous tissue into cartilaginous, fibrous, and cellular in succession is an illustration of the opposite, or *descending* series.

a. *Analogous Formations originating in the Fibrine of the Blood.*—The evidence of this is chiefly drawn from the effects which follow the arrest of the blood in the heart or bloodvessels, or, its effusion into the substance of an organ. We will suppose the blood so arrested in a vessel. The changes which ensue are well described by Dr. Carswell. The first change which the blood is observed to undergo in these circumstances is coagulation, the extent of which, in an artery, is almost always determined by the situation of the first branch of considerable size, sent off from the obstructed vessel, between the ligature and the heart, but which, in the veins, varies with the situation of the obstacle, and the greater or less facilities afforded for the development of a collateral circulation. Whatever may be the extent of the coagulation, the subsequent changes which take place in the blood are as follow: The coagulum acquires gradually an increase of density, which is accompanied by the removal of the red colouring matter of the blood. The fibrine becomes thus more and more apparent, and is recognised by its

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pale straw-colour, and more especially by the manifestation of its plastic properties, whereby it assumes, almost from the commencement, a laminated or fibriform arrangement. In this, the early stage of what may be called the process of organization of the fibrine, there is one circumstance which is peculiarly interesting, not only because it enables us to explain the origin and mode of formation of some analogous tissues, but because it shews that the vital endowments or plastic properties of fibrine, under the circumstances in which we are now considering it, are of the same kind as those of coagulable lymph, however much they may vary in degree. The circumstance is question in the tendency of the fibrine to accumulate at the circumference of the coagulum.

The process of organization of the fibrine may go on throughout the whole of the coagulum, or it may stop at some distance from the central portion of it. In the first case, the vessel becomes permanently obliterated, for the fibrine, as it acquires a more perfect organization, unites with the internal surface of the vessel, contracts gradually, and converts it into a fibrous cord. In the second case, the vessel may remain pervious to a limited extent, for the unorganized central portion of the coagulum, or the serum and red colouring matter, or, as sometimes happens, a grumous milky-looking fluid, found in this situation, may be slowly impelled onwards by the same contractile property of the eccentric tissue which produced the cord-like obliteration of the vessel in the former case, and thus the admission and circulation of the blood be re-established.

The vascular organization of the fibrine is another phenomenon of both interest and importance. It takes place under two circumstances:—first, when the circulation has been arrested by a mechanical cause which has no tendency to induce inflammation in the obstructed vessel, and the only appreciable organizable product is the fibrine of the coagulum; secondly, when the circulation has been arrested by a ligature, or by inflammation of the vessel, and the organizable product occurs not only in the form of fibrine, but also in that of coagulable or plastic lymph. In neither case has Dr. Carswell been able to discover the primary and independent formation of bloodvessels *in* this substance. On the contrary he has always found the vessels which it contained existing in the form of capillaries, derived from the collateral branches of the obstructed or obliterated vessel; for they were not only continuous with the latter, but, penetrating the fibrine at the circumference of the vessel at various points by a single branch, afterwards assumed a capillary distribution in the laminated and fibriform structure of this substance. Although the presence of plastic lymph is highly favourable to the vascular organization of the fibrine, yet Dr. Carswell cites several reasons for concluding that it is not absolutely necessary for it. He conceives that the fibrine, acting as a foreign body, induces some modification of the capillary circulation of the walls of the vessel.

Dr. Carswell proceeds to describe the formation of polypi of the heart and arteries and of phlebolites, illustrative as it is of the preceding doctrine. On the former head we perceive nothing to detain us. But, as Dr. Carswell remarks, the formation of what are denominated *phlebolites*, is a remarkable example of the gradual conversion of the fibrine of the blood in the veins, into isolated round or ovoid bodies of a stony hardness. These bodies vary

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from the size of hemp-seed to that of a pea; they consist at first of a clot of blood, which, as it loses its red colour, assumes all the physical characters of fibrine. This is disposed in several concentric layers, which acquire considerable density, approaching occasionally to that of fibrous tissue, without, however, presenting its other physical characters, and always terminating in a degree of hardness equal to that of stone. In this state, as well as at their commencement when in the form of a fibrinous coagulum, they are contained in a serous envelope, and lie merely in juxta-position with the lining membrane of the vein. They are generally found in the broad ligament of the uterus.

"I shall only further illustrate this interesting part of our subject by a passing notice of those formations which arise in the fibrine of the blood in its course through the arteries, apparently under the influence of a physical agent; but of what kind, or the manner in which it operates, is not known. Thus, needles which have been made to transfix an artery, become as it were encrusted with fibrine; spiculæ of bone projecting into the cavity of an artery, have sometimes appended to them pediculated pyriform masses of fibrine, an inch in length, half an inch in breadth, and an eighth of an inch in thickness. They present a fine radiated structure, and lie in the direction of the vessel with their basis from the heart, having received this direction from the current of the blood during their formation. An extremely interesting example of this kind is represented in Fasciculus VII. Plate III. *fig.* 2. It is on the same principle that a coagulum forms around a mesh of fine thread when introduced into the cavity of an artery, as in the case represented in Plate III. *fig.* 3. The experiment was performed on a dog, in the following manner, by M. Magendie:—After laying bare a portion of the axillary artery, a needle, armed with several fine threads, was introduced obliquely through the walls into the cavity of the vessel. The point being carried upwards, it was withdrawn in that direction, and the thread pulled till its extremity dropped within the vessel, when it was left floating in the stream of blood. On the following day the circulation through that part of the vessel had ceased, and on the third day the animal was killed. Externally, that portion of the vessel submitted to the experiment was red, swollen, and felt firm, and when laid open, contained a fusiform coagulum, about an inch and a half in length, suspended near its middle by the thread, enclosed within it, and passing through its centre in the direction of the circulation. The lining membrane of the artery was not inflamed, nor was there the slightest trace of plastic lymph."

B. *Analogous Formations originating in the Plastic Lymph of the Blood.* The plastic lymph separated from the blood is found by analysis to be essentially composed of fibrine, and enjoys two very remarkable properties—that of spontaneous coagulation—and that of becoming organized, and subservient to the formation of more perfect products.

C. *Formation of Bloodvessels.* This naturally occupies the attention of our author. He gives a very good account of the phenomenon, and it richly merits all the attention it receives. This organization is one of the most beautiful, one of the most characteristic, apparently one of the most complex, yet, probably, when it shall be thoroughly understood, it will turn out to be one of the most simple, of the vital processes.

Dr. Carswell takes the lymph effused on the free surface of a serous membrane, as the best adapted for examination. The stages (we shall abridge and methodize them) are these:—

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1. Besides the redness and vascularity which characterise inflammation of the pleura, and which appear at first in isolated spots situated in the subserous cellular tissue, but which, at a subsequent stage of the inflammation, extend to the serous membrane itself, the free surface of this membrane presents a villous or granular appearance, particularly at those points where the redness and vascularity are most marked. The pleura has now undergone important changes, especially at these points; it appears considerably increased in thickness, is so soft as to be easily removed by passing the edge of a scalpel over it, and contains small specks or striæ of blood. This softening of the pleura increases with the progress of the inflammation, and is probably, essential for the establishment of the vascular communication between the membrane and the lymph.

2. The plastic lymph which forms on the surface of the pleura appears first in the most inflamed points, but gradually increasing in quantity with the extension of the inflammation, forms a continuous layer of various thickness and extent. At first it is of the consistence of mucus or thin cream, of a pale yellowish-white or grey colour, and gradually acquires an increase of consistence amounting to that of coagulated albumen or pure fibrine. It is always most consistent the nearer it is examined to the surface of the pleura, the serum which it contains, when first effused, being expelled by its power of spontaneously coagulating, and therefore is most abundant in the more recent deposit, or is collected in the cavity of the pleura. Although presenting sometimes externally a cribriform or rather reticulated appearance, it appears to possess a fine cellular structure; for when it is not firmer than jelly, it may be suspended between the fingers without much of the serum with which it is then loaded making its escape; and when this fluid is forced out by compressing a quantity of the recent lymph in the hand, it resembles a mass of cobwebs moistened with water. The quantity of lymph organized or organizable varies with its vital power and with its distance from the inflamed membrane. The unorganized lymph may hang in shreds, or fall en masse to the dependent parts of cavities, where it is found for that reason in the greatest quantity.

3. Sometimes at a very early period, at others not until after several days, bloodvessels make their appearance in the plastic lymph of serous membranes. At a very early period of their formation, they are often so numerous as to give an almost uniform red colour to the false membrane in which they are distributed, and are always more numerous at this than at any subsequent period. They diminish in number and size as the false membrane acquires a more perfect organization, and scarcely a trace of them sometimes remains when it has assumed the structure of cellular and serous tissue. It is only in the false membranes extending from one serous surface to another that Dr. Carswell has been able to determine the disposition of the vessels. They are then distinctly seen to consist, each of a flexuous or tortuous trunk, the opposite extremities of which divide and subdivide into numerous minute branches, like the hepatic and abdominal divisions of the vena portæ, which communicate with, and can be easily injected from, the general vascular system.

4. We need not say that the precise mode in which bloodvessels are developed in lymph, has excited much attention, and some difference of opinion. The latter cannot be wondered at. The subject of examination is exceedingly

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minute, and exact observation is most difficult at that period when it is most necessary, the very commencement of the process.

Two leading theories divide physiologists and pathologists. The first maintains that the new vessels are prolongations of the old. The second contends that the new vessels are originally formed in the lymph, and that they afterwards communicate with the capillaries of the general circulation. Each hypothesis has its supporters and its facts, and it is difficult in the existing state of information to determine which is the true one. Certainly, that which supposes the extension of the old vessels to be the main agent in the production of the new, is most consistent with mere reasoning and with probability. But be this as it may, the minute investigations of Gruithausen, Daelinger, and Rattenbrunner on the changes actually observed, are not unworthy of attention. They are thus described by Dr. Carswell:—

"The first trace of the new bloodvessel appears in the form of a spot, which soon assumes a more defined and circumscribed shape. In this, granules make their appearance, which present an obscure motion, and the canal in which they are contained becomes elongated and assumes a crescentic form, the cornua of which are turned towards the extremities of the old vessels. The motion of the granules becomes more distinct as the channel in which they move increases in length. The cornua at last reach the extremities of the old vessels, whence the blood is transmitted through the former, and a vascular connection thus established by a kind of loop, between a neighbouring artery and vein. It is in this manner that a connection is established between the new vessels formed in the plastic lymph on the surface of a wound, and the vessels of the general circulation on the same side, but it does not appear to have been ascertained in what manner it is accomplished between the new vessels of both sides, after complete union of the wound has taken place. A similar mode of formation of new vessels has been observed to take place in the plastic lymph which has been effused into the parenchyma of organs, and on the surface of sores during the process of granulation. In the latter situation the lymph deposited on the surface of the sore presents numerous stellated red points, which undergo changes similar to those observed in the lymph of inflamed serous membranes, that is to say, they appear to give rise to the formation of new vessels, which afterwards become connected with the original vessels. The former are prolonged, at isolated points, in the lymph, and produce the vascular projections called granulations. The structure of these was first demonstrated by Professor Thomson of Edinburgh, who showed, by means of injections, that the vessels which they contain, proceeding from the vascular basis of the sore, arrive at their extremities, and there unite in the form of loops."

We now proceed to the consideration of the analogous tissues themselves. The first alluded to by Dr. Carswell is:—

II. *Erectile Tissue.* This is common on the surface of the body, forming nævi, aneurysm by anastomosis, &c. It may, like the natural erectile tissue, consist of a spongy or cellular structure, intercepted by fibrous tissue; or, which is more frequent, it may present an almost inextricable network of arteries and veins, sometimes the one, sometimes the other of these sets of vessels predominating. The only viscus in which Dr. C. has seen this tissue developed has been the liver. In that it assumes the form of a round tumor, varying from the size of a large pea to that of a small orange. Dr. Carswell has never seen it form after birth except at the lips and at the margin of the anus. There cannot, however, be a doubt that erectile tissue is

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not very unfrequently developed on the face and scalp, at a considerable period after birth.

III. *Cellular Tissue.* This is constantly developed. Between serous membranes it is familiarly known under the name of adhesions. We need not dwell on *them*. Our author draws attention to the important part which such adhesions play, when they occur between the uterus, fallopian tubes, ovaries, and surrounding parts. They are a not unfrequent and a very obvious cause of sterility. They produce, according to their situation and mode of attachment, either anteversion or retroversion of the uterus; they fix the Fallopian tubes in situations in which the fimbriated extremities cannot reach the ovaries; or they envelop the fimbriated extremities in such a manner as to render them quite impervious, (which is always the cause of dropsy of these tubes); or, lastly, they cover the ovaries so completely that impregnation is rendered impossible.

Dr. Carswell directs attention to an error not unlikely to be committed.

"The accidental cellular tissue, whenever it presents a free serface, is always covered by a serous membrane of new formation; and hence arises a frequent source of error regarding the seat of some morbid products. When these products are contained in the accidental cellular tissue, and, consequently, are covered by the new serous membrane, they are often described as being situated on the outside of the original serous membrane, as, for example, in the subpleural or subperitoneal cellular tissue; and this error is the more likely to be committed when the original serous membrane has nearly or altogether disappeared in the situation of cellular adhesions. This is often observed in extensive cellular adhesions of the pleura, peritoneum, and pericardium; and so complete is this change in some cases of chronic pericarditis, that hardly a trace even of the fibrous layer of the pericardium is left, a circumstance which, as Lobstein observes, has given rise to erroneous statements regarding the absence of this sac."

S. V. der Kolk is said to have injected the absorbents of accidental cellular tissue with mercury.

On the *adipose tissue* there is little said. But we must pause at—

IV. *Serous Tissue.* Under this head, we are naturally presented with an account of those cysts which are formed of adventitious serous membrane. These must, of course, be distinguished from the cysts which are enlargements of what naturally exist, as of the Graafian vesicles, of bursæ, of ganglia, or of obstructed ducts or follicles.

"The adventitious serous cyst, properly so called, consists of a serous membrane, having the form of a shut sac, the external surface of which has a cellulo-vascular connexion with the contiguous tissues, the internal or free surface being in contact with the substances which it encloses. This connexion may be formed between it and the natural cellular tissue of organs; or between accidental cellular, fibrous, cartilaginous, and osseous tissues, all of which not rarely contribute, particularly in the liver, to form the entire walls of the cyst. Or, lastly, it may be connected with the heterologous formations, especially the carcinomatous, when they exist as pediculated tumours, and then constitutes their capsular covering, in the form of a reflected membrane, extending over their whole surface to the point of their attachment. It is from this circumstance, I believe, that such tumours have been described not only as being con-

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tained within, but as being produced by, this kind of serous-cyst, the anatomical and physical characters of which have been minutely described by Dr. Hodgkin, and to which he attributes peculiar properties, the exercise of which, he believes, gives origin to many or most of the heterologous formations."

Dr. Carswell thinks, there are good grounds for believing that the origin of the adventitious serous cysts is inflammatory, or dependent on causes which excite inflammation of the cellular tissue of circumscribed portions of organs. The irritation of a bullet lodged in a organ, tuberculous matter, the presence of entozoa, may give rise to the effusion of lymph, and that becoming organized, will form a cyst; but, however formed, they are afterwards variously affected by disease, and may contain a great variety of substances. They may envelope, for instance, the heterologous or malignant formations—serous, albuminous, mucous, or puriform fluids—lymph, fibrine, or blood variously modified—tuberculous matter, cholesterine, and some other anomalous products. The ovaries, testes, and mammæ are more frequently the seat of them than any other organs are. They are frequent in the kidneys of old persons; but very seldom have they been seen in the brain or lungs. In the organs of reproduction they are generally collected together in clusters; in the brain and lungs solitary; and in the kidneys in both forms, but more often solitary.

V. *Mucous Tissue.*—The accidental formation of mucous tissue is observed, 1st, in situations in which the natural mucous membrane does not exist, as in those solutions of continuity which follow inflammation, ulceration, or mortification of the cellular tissue, and which afterwards become the seat of chronic abscess, whether in the form of a shut cavity, or communicating with the external surface of the body by what is called a *fistulous passage*; 2d, in the situation of a natural mucous membrane which has been destroyed, the cicatrix which supplies its place consisting of a mucous tissue.

The mucous tissue in either case originates in the lymph, deposited in the inflamed cellular tissue, and subsequently organized. The following is the description of the change, presented by our author.

"In the first stage of the process, the cellular tissue is consolidated by the lymph, of which there is also a layer on its denuded surface; it then acquires a vascular structure, which often produces a deep red colour, accompanied by an irregular granular appearance in this situation, and here also it afterwards gradually assumes either a uniform, smooth, glossy, or rough villous aspect, or that of simple mucous membrane. The mucous tissue thus formed adheres intimately to, or is confounded with, the cellular tissue, which has either regained its natural state or has acquired a considerable degree of density. The colour which it presents varies much in abscesses and fistulæ, according to the degree of inflammation, the quantity of blood which it contains, and the chemical action of the gaseous products to which this fluid is often subjected. It is generally, however, of a reddish or greyish blue colour in these situations, and in the intestines differs so little from that of the natural mucous membrane, that the cicatrix which it forms would escape detection if not carefully sought for."

In no situation, does the accidental mucous tissue present any trace of muciparous follicles or glands, while its villi differ both in form and structure from those of natural mucous membrane. It both secretes and absorbs,

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the secretion sometimes resembling the natural mucus. Villermé has found the accidental mucous membrane of fistulæ lined with an epithelium continuous with the epidermis. The accidental, like the natural mucous tissue, is not disposed to adhesion when inflamed, its secretion not being organizable. To produce adhesion we must destroy it. Hence many of the operations for fistulæ and chronic abscesses.

VI. *Cutaneous Tissue.* The process of cicatrization has been too frequently described to permit us to expect any thing on this head. We may merely hint that, although the papillæ are sometimes partially developed in the new skin, the muciparous glands and the hair do not seem to be reproduced, if the destruction of the cutis has been complete.

"*Hair.* The accidental development of hair is seen to take place most frequently on those parts of the body affected with nævi, where it is often very abundant, fine or coarse, short or long, and of various colours. But here, like the nævi which it accompanies, it is to be considered rather as a congenital than an accidental formation. So also is the hair so often found in ovarian cysts. That found in subcutaneous cysts, as those of the scalp and eyelids, is probably the result of accidental development, as it arises from the interior of these cysts, which is lined by the reflected cutaneous tissue. The most remarkable examples of the accidental development of hair are met with in some portions of the natural mucous membrane, as that covering the caruncula lachrymalis, the tongue, and urinary bladder. In the latter situation, however, it has always been found loose, without bulbs, seldom more than an inch in length, and has generally been passed in the urine with the phosphate of lime, sometimes in great quantity."

Nails. These are reproduced, as they were formed, by the cutis which secretes them. But new nails are often deformed. A "horny tissue," sometimes grows from cicatrices from the stump, for example, of an amputated finger. This is concrete albumen, the secretion of the inflamed cutis. Horny productions may, it is well known, grow from the skin, and particularly from the scalp. They appear to be altered and consolidated sebaceous secretion.

VII. *Fibrous, Fibro-cartilaginous, and Osseous Tissues.* These occur under nearly similar circumstances, and follow each other nearly in the order set down. This agrees with what is observed in the natural production of bone. The following account of the reparation of bone, though long as an extract, is short as a description, and in the latter sense is so true as well as brief, that we cannot resist the opportunity of presenting it unbroken to our readers.

"Whether the formation of new bone is to effect the reunion of a fracture, or the restoration of a loss of substance of the old bone, the process by means of which it is accomplished is essentially the same as that which takes place in lesions of a similar kind of the soft parts. Inflammation, the effusion of plastic lymph, the cellulo-vascular organization of this, and its gradual conversion into fibrous, fibro-cartilaginous, cartilaginous, and osseous tissues, follow each other in succession. The material out of which the new bone is formed is the plastic lymph, which is furnished by the periosteum, medullary membrane, surrounding cellular tissue, and the substance of the bone itself, according as the inflam-

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mation by which it is preceded affects one or all of these parts, a circumstance which will depend chiefly on the original seat or extent of the injury or disease. The parts which contribute most to the formation of the new bone, and in which this process is first established, are those whose anatomical and physiological conditions render them most susceptible of inflammation, or in other words, those whose vital endowments are greatest, and which, consequently, furnish the most abundant supply of plastic lymph. These are, 1st, the periosteum; 2d, the surrounding cellular tissue; 3d, the medullary membrane; 4th, the substance of the bone. It is not until some time after the three former have been the seat of inflammation, and the plastic lymph effused by them has become organized, that the substance of the bone participates in the same change, and takes a part in the regenerativ eprocess. The plastic lymph is always furnished in greatest abundance by the periosteum and surrounding cellular tissue, as is clearly shown by the appearances which accompany fracture of a long bone. It is found much more abundant around the circumference, and in the situation of the fracture, than elsewhere; and if the inflammation has been severe, forms a mass of considerable extent projecting outwards, and dipping between the fractured extremities, where it meets with that effused by the medullary membrane. Hence, also, the cellulo-vascular organization of the lymph, and the subsequent changes which it undergoes, are effected in the same relative order, the formation of the new tissues being far advanced or completed around the circumference of the bone, before it has commenced or has made much progress between the fractured extremities, and especially between these and the uniting medium. It is on account of the ossific process being first completed in the tissues around the bone, that these are said to form the *provisory callus*, a provision, indeed, which affords time for the development of a vascular connexion between them and the extremities of the bone, and the accomplishment of a permanent bony union. 16.

Dr. Carswell very justly observes that an arrest of the reparative process may take place, and the fragments of bone may be united only by fibrous or fibro-cartilaginous substance. He might have added that the sort of cyst in which the fractured ends are occasionally enlarged, as in a capsule, while those ends themselves become rounded, as in an articulation, is nothing more than an example of the same phenomenon, an arrest of the reproductive action.

Dr. Carswell gives a sketch of the changes which take place in necrosis. There is nothing in it to detain us.

Prior to quitting the analogous formations, Dr. Carswell makes a few observations on the tendency to contraction displayed by the fibrous tissue, and on the occurrence of the cartilaginous tissue in the form of isolated round or ovoid bodies in the cavities of serous or synovial membranes.

A. The fibrous tissue, says Dr. Carswell, whether originating in the plastic lymph of serous membranes or of that of the cellular tissue of organs, and when it does not undergo any further change towards the formation of the fibro-cartilaginous or osseous tissue, has a greater or less tendency to contract upon itself, and consequently to modify the nutrition, bulk, form, and situation of the parts with which it is connected. Atrophy of a lung, when this organ is covered by a fibrous envelope in chronic pleurisy; stricture of the intestines after cicatrisation of ulcers which had destroyed the muscular coat around the circumference of the tube; displacement of the fingers, of the lower lip and jaw, &c. after burns—are effects of the contractile property of this tissue. Every body knows the mischief occasioned

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by the contraction of the cicatrices of burns. Dr. Carswell has seen it produce complete closure of the mouth and nostrils, and death from inanition.

"When treating of the vascular organization of lymph in the form of membranous adhesions and granulations, I stated that these diminish in bulk, and acquire an increase of density in proportion as their vascular element becomes less apparent and they assume the fibrous character. These changes I regard as the early indices of the contractile property which afterwards becomes so apparent in this tissue in the cicatrices of burns, and indeed of most cicatrices which succeed to a considerable loss of substance, more especially when the process of regeneration is accomplished by granulation. And it is also to be observed, that the more exuberant and vascular the granulations, the more certainly is the contractile property acquired, and its effects manifested in the cicatrix which follows. These conditions of the granulations are decidedly much more conspicuous after burns than after any other lesion, and it is on this account, as well as from the facts already noticed, that I feel disposed to ascribe the existence of this property to an excess of the vascular in combination with the fibrous tissue. This hypothesis derives support from the fact that the contractile property of this tissue is slight in degree when the process of granulation is retarded, or its activity repressed, before cicatrization is allowed to take place."

This hypothesis is ingenious. Whoever has watched carefully the process of cicatrisation after burns, and the changes of the cicatrix itself, must have observed that the activity of the vessels does not cease immediately after the new skin is formed. It is not uncommon for deposition to go on under the newly-formed cuticle, and a cicatrix which at first was not raised above the level of the surrounding surface, becomes in a short time elevated and welted, independently of any appreciable contraction. Cicatrices, too, are not unfrequently the seat of chronic inflammation. These circumstances go to prove that the cicatrix is in the first instance the seat of a good deal of vascular action, and it is highly probable that Dr. Carswell's conjecture is correct, and that the subsequent contraction is very much in the ratio of that action.

B. The "loose cartilages" of joints are ascribed by Dr. Carswell to lymph effused from the synovial membrane, organized in connexion with that membrane, converted into the cartilaginous tissue, and finally detached. John Hunter ascribed them to coagulum thus organized. Dr. Carswell has seen no fact corroborating Hunter's supposition. But he has found fibrous tumors in the cavity of the abdomen, which had been originally situated beneath the peritoneum covering the fundus and broad ligaments of the uterus, and he once saw a small, pyriform, fibrinous coagulum, covered by a prolongation of the peritoneum, and supplied with several bloodvessels from this membrane, in a rabbit (a case similar to that observed by John Hunter,) which, at some future stage of its development, would no doubt have become detached and fallen into the cavity of the abdomen.

It is possible, he adds, that the loose cartilages may also originate in the manner described by Béclard, that is to say, the cartilaginous formation having taken place in the cellular tissue, behind the synovial membrane, carries before it, in proportion as it increases in bulk, a portion of this membrane, which, having become pediculated, is at last detached, and drops into the cavity of the joint.

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VIII. *Analogous Transformations.* The analogous formation is the addition of one tissue to another. The analogous transformation is the conversion of one tissue into another. The transformations are subjected to the same laws which preside over the regular development of the natural tissues, and observe the same order or gradation by which these pass the one into the other at different periods of fœtal life and in different animals. Thus the cellular tissue is transformed into serous or fibrous tissue, and this into fibro-cartilaginous, cartilaginous, and osseous tissues in succession, constituting, as already observed, the ascending series; and when taking place in the reverse order, the descending series of this class of analogous tissues. Hence it follows that those tissues which, in the physiological condition, do not observe this order of succession, are not found to do so in the pathological condition. Thus bone, muscle, nervous matter, &c. are not successive developments of each other in the physiological condition, and do not occur in the pathological.

All the transformations of the ascending series may originate in the cellular tissue, in which and in the fibrous they are most frequent. All those of the descending series may originate in other tissues and in glandular and parenchymatous organs, where they are most rife. These organs, indeed, are susceptible of undergoing only the second series of transformations, as well as the muscular and nervous tissues. The mucous and cutaneous tissues are subject to both, being convertible the one into the other, as also the cartilaginous and osseous, the fibrous and cellular tissues.

Our author offers a description of the fibrous tumors of the uterus on which, however, it is unnecessary for us to dwell. He has never seen these tumors degenerate into malignant disease.

The osseous transformation, which in Dr. Carswell's opinion, is exclusively confined to the cellular, fibrous, fibro-cartilaginous, and cartilaginous tissues, usually makes its appearance after the age of forty in the cellular and fibrous tissues of the vascular system. No probable reason, as he observes, has been assigned for its occurring so frequently in the arteries and so seldom in the veins, except perhaps that the former, from the greatly increased exercise of their function, compared with that of the latter, arrive sooner at that condition which constitutes the period of decay, a condition which in this as well as in other tissues is so favourable to its production. The osseous transformation occurs most frequently in the aorta, the arteries of the brain, and lower extremities; much more seldom in the valves of the right than in those of the left side of the heart; rarely in the pulmonary artery and veins. Its seat in the arteries is the cellular tissue which separates the inner membrane from the middle coat, and in the middle coat itself. It appears in the form of small circular, oval, or irregular patches, of a dull white or yellowish colour, of the consistence of cartilage, in the former; and in that of plates, spiculæ, or rings in the latter, occupying a greater or less extent of the vessel, portions of which are sometimes converted into an osteo-cretaceous tube resembling the trachea of a bird. Over the deposit the inner tunic of the vessel is ruptured or ulcerates, and aneurysm or hæmorrhage is well known to be the consequence.

"The osseous transformation is always very imperfect in the vascular system. It contains a much greater quantity of earthy matter than the natural bony

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tissue, is therefore much harder, and in general dry and brittle. It rarely presents, in any situation in which it is formed, either medullary cavities or periosteum. Cartilage and fibro-cartilage are perhaps the only tissues in which this occasionally occurs."

The fatty transformation of organs is the last subject which occupies our author. He believes that such a transformation does really take place in some organs, as the muscles and liver, and sometimes in the kidneys and pancreas.

"It is most marked in the muscles of the inferior extremities of old persons affected with paralysis, and which have long remained in a state of absolute rest. In such cases I have found the affected muscles but little altered, except in their colour and chemical composition. They are of a pale-white or straw-colour, diminished rather than increased in bulk, and the arrangement of their fibres perfectly distinct. Indeed, the larger bundles of the muscular fibres, and their subdivision into smaller ones, can easily be traced with the scalpel. When dissecting the muscular fibres, or when these are pressed between the fingers, a clear oily fluid oozes out, and which, when a portion of the muscle has remained some time in alcohol, collects in considerable quantity on the surface of this spirit. According to Lobstein, the chemical analysis of muscular tissue which has undergone the fatty degeneration affords an oily matter, a substance resembling boiled muscle, gelatine, adipocire, and solid fat."

This concludes our account of the present fasciculus. The plates are illustrative of the text and excellent in point of execution. Dr. Carswell deserves encouragement, and we trust that, despite of the apathy of the Profession on matters which are looked on as more abstractedly scientific than immediately practical, he will obtain it.

In our next Number we will return to the inexhaustible subject of pathological anatomy and select some series of changes for description.

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VITAL STATISTICS.

1. A STATISTICAL ACCOUNT OF THE BRITISH EMPIRE; exhibiting its Extent, Physical Capacities, Population, Industry, and Civil and Religious Institutions. By *J. R. M'Culloch*, Esq. assisted by numerous Contributors. In 2 Volumes 8vo, pp. 630-692. Charles Knight, London, 1837.

2. MEDICAL STATISTICS, OR THE CAUSES AND EFFECTS OF THE EXTENSION OF HUMAN LIFE. By *J. F. Palmer*, Senior Surgeon to the St. George's and St. James's Dispensary, &c. [From the Dublin Review.]

A STATISTICAL account of the British Empire was much wanted. Englishmen have long bugged themselves in the belief, that they excel all foreigners in occupations and in inquiries which practically affect the business of life. The long wars with the French, and our exclusion from the Continent, while they threw us on our national resources, encouraged our national industry, and exhibited our national energy, fostered at the same time that exclusive spirit, which has been said always to characterise islanders, and which, like individual conceit, is too apt to engender ignorance and repress improvement. It is now admitted that, in many respects, the Continental Nations excel us, and in few more than in the application of science to matters of administration.

This is not the place for any but medical discussions, and we have no intention of adverting to those parts of Mr. M'Culloch's elaborate and valuable work, which do not immediately affect us. In short, our business is with vital statistics, and vital statistics only.

A chapter is devoted to them in the second volume, and its composition has been entrusted to Mr. Farr, who appears to have executed it with ability and care. The chapter in question occupies thirty-five pages, and is too much condensed, and too circumstantial, to enable us to present a complete account of it. Indeed that would be unnecessary, as some of it is familiar to the medical reader. Another circumstance which precludes our pursuing the writer in detail, is his occasional disregard for simple and obvious arrangement.

The subjects to which we shall first advert, are those involved in the mortality of the population.

It appears that the annual mortality is about 2·13 per cent. That mortality varies with age, sex, occupation, and locality.

1. *Influence of Age on Mortality.* From birth to the age of puberty, the sickness and mortality decline; from puberty they increase slowly, but in a geometrical progression, up to the 50th or 60th year, and then more rapidly to the end. The following table will shew the ratio of mortality to age in the countries specified.

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I. TABLE showing, in each of Thirteen Intervals of Age, the Number of Deaths which occur annually for every 1,000 Persons, living at the same Age, in England, Sweden, and Belgium.

Between Ages.	England and Wales.					Carlisle.	Belgium.	Sweden.	
	Females, 7 Years, 1818-24.			18 years, 1813-30.		9 Years, 1779-87.	1829, both Sexes.	21 Years, 1755-75, both Sexes.	30 Years, 1776-95, both Sexes.
	Living in 1821.	Dying in 7 Years.	Annual Deaths per 1,000.	Males.	Females.				
0 and 5	774,689	239,482	45·6	53·5	46·0	82·3	65·8	90·1	85·0
5 10	682,457	30,173	6·5	7·2	6·7	10·2	8·7	14·2	13·6
10 15	569,366	20,244	5·3	5·0	5·2	5·0	5·4	6·6	6·2
15 20	535,569	27,391	7·6	7·2	7·6	6·8	6·6	7·6	7·0
20 30	901,338	61,701	10·1	10·1	10·4	7·6	9·1	9·2	8·9
30 40	649,507	53,417	12·1	11·4	12·4	10·6	10·0	12·2	11·6
40 50	500,977	50,214	14·8	14·9	14·9	14·3	13·6	17·4	16·1
50 60	352,160	49,671	20·8	23·4	21·6	18·3	21·7	26·4	23·9
60 70	249,184	67,918	40·2	45·3	41·2	41·2	38·5	48·1	49·3
70 80	124,648	80,138	94·9	101·2	96·9	83·0	90·9	102·3	104·1
80 90	36,315	52,318	212·7	227·1	214·6	175·6	178·8	207·8	197·4
90 100	3,280	8,169	367·8	370·1	371·9	284·4	304·1	394·1	351·3
Above 100	129	512	586·1	611·1	560·6				
Ages specified ..	5,379,619	741,348	20·3	21·7	20·7	25·0	22·7	28·9	26·8
Ages omitted ..	765,090	27,157							
Total enumerated	6,144,709	768,505							
Estimated omission		106,780							

It would seem that the mortality of the whole English population, between the ages of 20 and 40, was higher than in Belgium and Sweden. The mortality of children, under five years of age, has materially decreased in England within the last century—a fact à priori probable, and not at all inexplicable. In London, the bills of mortality prove that, in the 20 years, 1730-49, out of 100 born, 74·5 died under the age of 5 years; while, in the 20 years, 1810-29, only 31·8 died out of the same number.

2. *Influence of Sex on Mortality.* Professors of statistics would seem to

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commit blunders like less exact folks, or, at all events, to disagree to a considerable extent. Nay, there is among them not a little of that spirit which distinguishes carpenters, tailors, members of trades, two of whom are said to be never capable of a very lively friendship. Thus, Mr. Edmonds abuses Mr. Rickman and Mr. Finlaison, and Mr. Farr would appear to cleave to Mr. Edmonds. But this by the way.

If any point was considered established it was the superiority of female over male life. Nay, a Life Assurance Company in London has, within these few months, acted publicly on that conclusion, and lowered the premium on female insurers. But this would appear to be a delusion, and the Assurance Company would seem likely to make a sorry bargain.*

Contrary, says Mr. Farr, to the Swedish observations, the mortality of females, between the ages of 10 and 40, is higher than that of males; it is only in childhood and after the 50th year, that the mortality of females is lower than that of males.

3. *Differences of Mortality in the Counties, Towns, &c. of England.* Some of the counties of England are much less healthy than others are. Cornwall and Devon are the healthiest—Cambridge, Kent, Surrey, and Middlesex the reverse. The counties in which the greatest number of inhabitants are congregated in towns, are generally the most unhealthy.

Mr. Edmonds, whom Mr. Farr copies, divides the English counties into eight classes. *In class* 1, are Cornwall and Devon.—*In class* 2, Wales and Monmouth.—*In class* 3, Dorset, Somerset, Wilts, Gloucester, Hereford, Northumberland, and Cumberland.—*In class* 4, Westmoreland, North York, Rutland, Norfolk, Suffolk, and Hertford. *In class* 5, Durham, East York, West York, Leicester, and Lincoln.—*In class* 6, Salop, Derby, Northampton, Huntingdon, Essex, Bedford, Bucks, Oxford, Berks, Southampton, Sussex. *In class* 7, Lancaster, Chester, Nottingham, Stafford, Warwick, Worcester, Cambridge, and Kent. *In class* 8, Surrey and Middlesex.

The mortality of the inhabitants of the counties, thus arranged, is displayed by Mr. Edmonds in the following table.

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* We can state as a fact, that a large and ably-conducted Life Assurance Company in London, has met with its greatest losses on its female lives. It has had no inducement to lower the rate of insurance on those lives. On the contrary, it would willingly reject all insurances on women; and, but for the loss of business and the odium which such a singularity might entail on it, it is far from impossible that such a step would be taken. It is probable that many circumstances contribute to diminish the value of *insured* female lives. The preliminary examinations of a woman's state of health can seldom be so searching, or at least so accurate, as those of a man's. Women do not scruple to deceive, and a practical acquaintance with their habits and their conduct establishes the conviction that, in *all* classes, they possess a feebler sense of the obligation of truth, in the ordinary business of life, than men have. Why this should be, we leave to casuists to determine. Assurance Companies have discovered that it is so.

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TABLE showing, in each of Six Gradations of Age, the Mortality per cent. of each Sex in each of Eight Classes of English Counties.

Class.	Males (corrected).*							Females.						
	0·5	5·10	10·15	15·30	30·60	Above 60	All Ages.	0·5	5·10	10·15	15·30	30·60	Above 60.	All Ages.
1	4·19	·63	·38	·75	1·36	7·58	1·90	3·65	·63	·41	·70	1·18	7·14	1·78
2	3·87	·60	·44	·83	1·31	7·46	1·83	3·39	·59	·43	·75	1·26	7·06	1·79
3	4·14	·63	·44	·76	1·32	7·15	1·86	3·58	·59	·47	·83	1·35	6·96	1·83
4	4·36	·58	·44	·80	1·23	7·30	1·92	3·76	·55	·52	·92	1·35	7·12	1·90
5	5·24	·72	·52	·86	1·38	7·47	2·09	4·52	·64	·52	·93	1·47	7·33	2·00
6	4·45	·62	·47	·87	1·40	7·62	1·99	3·81	·58	·55	1·05	1·50	7·51	1·96
7	6·11	·78	·56	1·03	1·64	7·64	2·34	5·33	·71	·56	1·03	1·65	7·48	2·18
8	8·19	1·05	·53	·95	2·27	10·72	2·88	6·68	·95	·53	·85	1·91	9·95	2·50
					1·93									
Totals	5·30	·72	·49	·88	1·53	7·77	2·15	4·56	·66	·52	·93	1·52	7·53	2·05
					1·33									
	Table of "Mean Mortality," when period of "Infancy" terminates at seven years.							4·47	·77	·65	·86	1·66	7·62	2·09

* The apparent mortality of the male sex between 15 and 30, between 30 and 60, and at all ages, has been diminished by ·06 in the total, and in classes 1, 2, and 3; it has been diminished by ·03 in classes 4, 5, 6, and 7; and by ·10 in the eighth class.

The mortality of cities is highly interesting, not only to their inhabitants, but to the whole nation. The grandeur of a people depends on *their* multiplication, their wealth, and populousness. If the marts of commerce are,

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as Dr. Price has designated them, the "graves of men," we must first deplore—then attempt to remedy the evil. A necessary evil, to some extent, it probably must ever be; yet the history of London is sufficient to prove that much has been done, and to render it probable that more may be done still, to augment the salubrity of cities.

A table is given for the purpose of shewing the increasing mortality in Glasgow. It shews, too, the lesser mortality of females in that city—a fact treated by Mr. Farr as a gross blunder on the part of Mr. Finlaison. It appears from the table, that between the ages of 30 and 60, the mortality of each sex has increased 20 per cent. every five years between 1821 and 1835. This is attributed in part to the augmented influx of the Irish, who introduce their national habits and national fevers. By a report of the Glasgow Infirmary, it seems that, in 1835, out of 3,260 patients treated, 1,258 had fevers, and of these 125 died.

The relative mortality of England, Scotland, and Ireland cannot at present be determined. But the following calculation may lead to an approximation to the truth. The number, above the age of 60 years, alive, for every 100 living between the ages of 30 and 60, was, in—

England and Wales..	(Females)	27·5
Scotland.....	(Females)	28·0
Ireland	(Males and Females).... .	15·7
Belgium.....	(Males and Females).....	30·3.

4. *Influence of Foreign Stations on our Army.* This is shewn in a table compiled by the diligence of Mr. Marshall, a highly intelligent surgeon.

TABLE of the Mortality of the British Army, showing the mean Number of Annual Deaths out of 100 living at each Station mentioned.

Time and Place of Observation.	English Army.	Extent of Observations.		Annual Rate of Mortality per Cent.		
		Average Force.	Years.	Maximum.	Mean.	Minimum.
*The United Kingdom ..	British Army.....	46,460	10	.....	1·5	
*Ireland, 1797-1828....	Ditto	36,921	32	2·0	1·5	1·1
Mediterranean.						
*Malta, 1824-31	The garrison	2,226	8	2·8	1·5	1·0
*Gibraltar	Ditto	3,267	17	13·4	2·0	0·7
*Ionian Islands.....	The troops.....	3,467	13	3·6	2·6	1·4
East Indies.						
*Fort St. George Presid.	(1) European troops	11,820	4	7·1	4·8	3·2
*Madras, 1827-30....	Native troops	69,550	4	1·6	1·4	1·0
*Bengal, 1826-32	(2) European troops	8,700	7	9·7	5·7	3·8
West Indies.						
*Windward Islands .	1796-1805, ditto ..	13,610	10	27·7	18·3	8·0
*Leeward Islands	1810-28, ditto	5,768	19	23·4	11·3	4·7
*Jamaica Honduras, 1810-28.	Ditto	2,528	19	47·2	15·5	7·8
*Jamaica, Honduras, Windward and Leeward Islands	Colonial troops, (Blacks)..	2,733	19	8·4	5·5	1·8

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The mortality of the native troops in the Madras Presidency was only 1·4 per cent.; that of the European troops was quadrupled in Bengal. At home 1·5, in Bengal 5·7 per cent. of the European troops died. The climate of the East Indies is, therefore, congenial to the Hindoos, and only extraordinarily fatal to foreigners.

The mortality of the French infantry is greater than that of our own army on the home station. Its mean annual rate per cent. is, for the troops of the line, 2·00—for the Garde Royale, 1·47—for the whole army, 1·94.

Mortality is usually the result of sickness. The former has been reduced by the formulæ of calculation to something approaching to certainty and rule. Will sickness submit to similar calculations? At first sight it might appear difficult, if not impossible, to procure adequate data; nay, à priori, it does not *seem* to follow, that because death observes an appreciable ratio to age and sex, sickness will do so too. It is certain that the laws of sickness can never be determined with any thing like the same precision as are those of death—because death is chronicled in all classes, and sickness is not. It is only under peculiar circumstances, that attacks of sickness are regularly, or may be regularly registered—amongst official employés, whose absence is felt, and whose illness must be certified. This is one obstacle to accuracy. But the very term sickness is indefinite. One person will lie upon the sofa for a cold—the mechanic, affected with the same complaint, will pursue his unceasing and laborious occupation. Some persons, of weak habits and infirm health, may be said to be always labouring under sickness—that is, they suffer ailments which would utterly disable from active employments, but which yet suffer them to engage in sedentary or light occupations. A diligent pursuit of the details of sickness—a careful observation of the habits of individuals and of classes, would enable the inquirer to ascertain and to point out the numerous sources of fallacy and of doubt, that must surround the attempt to enunciate a law of sickness.

The benefit societies, whose necessities have forced, and whose circumstances have enabled them to calculate, to some extent, the liabilities to sickness, arrange *that* under three heads:—*Bedfast* sickness, when the individual is absolutely incapable of exertion—*walking* sickness, when the patient is incapable of entire attention to his concerns, as he is in many chronic diseases, after reduced dislocations, and so forth—and *permanent* sickness, as is the case of the paralytic, the maimed, the incurables.

From a table, shewing the proportion of sick out of 100 living at each interval of age, in friendly societies, it appears that, between the ages of 30 and 40, 1·32 are constantly sick in the Scotch benefit societies, and 1·83 in the English. Between the ages of 60 and 70, 10·80 are ill in the former, and 11·26 in the latter. Thus, the sickness increases with the age. The time for all ages is 2·45 in the Scotch societies—2·76 in the English.

In the parish of Methven, in Perthshire, it was ascertained that 35 out of 743, or 4·7 per cent. of the male population, above 15, would not, from bodily or mental infirmity, have been admitted as members of the friendly societies at all.

Bad health, however, and sickness are not, in the poorer classes, equivalent terms. Thus, Dr. Forbes ascertained, by personal examination of 120 Cornish miners, in actual employment, that only 63 had good health; of the remaining half, 26 had difficulty of breathing, 14 pain of chest, 10

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pain of stomach and bowels, 5 lumbago, pain of shoulder, palpitation, scrofula, or fits. Out of 115 children below 18 years of age, Dr. Bisset Hawkins states, that 84 had good health; 25 middling health; 6 bad health. Of the miners at work, only 53—of the factory children only 73, per cent. enjoyed good health.

A return has been made from the various dock-yards, of the numbers of workmen sick in the years 1830, 1831, and 1832, and the following table exhibits a condensed view of the facts that they convey.

TABLE presenting a condensed View of the above Facts.

Years.	Average Number of Men.	Number of Cases.		Days of Sickness from spontaneous Disease.	Days of Sickness from Injuries.	Total Days of Sickness.
		Diseases.	Hurts.			
1830	2,079	697	357	9,188	5,884	15,072
1831	2,002	888	325	9,605	4,620	14,225
1832	1,867	665	329	8,617	5,086	13,703
3 years	5,939	2,250	1,011	27,410	15,590	43,000

This table furnishes, as the mean of the three years, the following interesting results. In the year, 1 man in 6 is seriously hurt; 2 in 5 fall ill. Each man, on an average, has an attack of illness, either spontaneous or caused by external injury, every 2 years; and, at an average, each disease lasts 14 days. Mr. Farr goes on to observe, that it may safely be assumed that, of the 21,000 labourers employed in the dock-yards, 2 per cent., or more than 420, are constantly kept at home by diseases, two-thirds of which are independent of accidents.

The most accurate report which has been yet published would seem to be that of the state of health among the men, employed by the East India Company in London. It is contained in a supplementary report, by Dr. Mitchell, to that of the Factory Commissioners. It was "in the form of a large volume, containing a list of 2,461 labourers, employed in the month of April, 1823, with a statement of the number of days' illness experienced by these labourers, one by one, year by year, for the ten succeeding years; also the date of every death, and the date when any labourer ceased to be employed, by being superannuated and pensioned, dismissed, or by voluntarily leaving the service of the Company."

Every labourer put upon the sick list is allowed 1s. 6d. a day, Sundays included; he is also seen every day by the surgeon, and, therefore, remains no longer absent than the case requires.

During the 10 years, 496 died, 248 were pensioned, and 208 left the service or were dismissed. The reporter, Dr. Mitchell, has calculated a table of the duration of sickness per annum for every age, from 16 to 81, which we subjoin :—

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Age.	Average Duration of Sickness per Ann. for every Man employed.	Average Duration of Sickness for every Man sick.	Age.	Average Duration of Sickness per Ann. for every Man employed.	Average Duration of Sickness for every Man sick.
	Days.	*Days.*		*Days.*	*Days.*
Under 21	4·02	13·96	51 to 61	7·00	28·60
21 to 31	4·94	18·70	61 — 71	10·08	29·07
31 — 41	5·06	22·63	71 — 81	11·63	31·77
41 — 51	5·31	23·21			

From other calculations and another table, it appears that the annual rate of mortality was 3·13 per cent. Notwithstanding the selection of healthy men as labourers, the deaths between the ages of 40 and 60, agree very nearly with the general mortality of males in London, between the years 1813 and 1830. Amongst the labourers, from 40 to 50, the annual mortality was 2·43: amongst the male inhabitants of London, it was 2·54—amongst the males in Stockholm, from 1755 to 1763, it was 4·67. Between the ages of 50 and 60, the mortality of the labourers was 4·27—of males in London, 4·04—of males in Stockholm, 6·46.

The mortality under 40, observes Mr. Farr, is not so high among the labourers, because the greater part of them are selected healthy men, received into the service between the age of 20 and 35; after 50 it is higher than the general mortality in London. These men were well supplied with food and clothing; their work without being hard insured regular muscular exercise; in sickness they had rest and proper medical attendance; yet between 40 and 50 the mortality was 67 per cent., between 50 and 60 as much as 82 per cent. higher than the mortality at the same ages in all England. Such facts as these annihilate the supposition, that the increased mortality in cities is due to want of food and greater misery; nor, although these men drank freely, can we admit that their moral habits differed so greatly from those of country labourers as to account for their greater mortality.

Of the 2,461 labourers, 10 per cent. were pensioned in the course of ten years; 8 per cent. were discharged, or quitted the service; 1 man in 81 working a year was pensioned; 1 in 4 had an attack of sickness; 1 in 60 was constantly on the sick list; 1 in 21 (4·79 per cent.) of the labourers was a pensioner; and 1 in 6 of the pensioners died annually. Some other observations on this head we pass over. They merit the attention of benefit societies, but do not require our's.

Two tables are given of the sickness of factory labourers in Lancashire and Glasgow. But it seems that they are open to objection, and we therefore pass them by. So far as they go, they exhibit a greater amount of sickness in the females than in the males, both in Lancashire and Glasgow.

The mortality of the English army is higher than the mortality of the general population; and the sickness, including every class of disease, is more than twice as great as that recorded in the preceding tables, at the ages 20-35, which correspond nearly with the ages of the troops. The mean proportion sick per cent. in Ireland (1797-1828), observed on an average force

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of 36,921 men, amounted to 5·1; but a certain proportion of the sickness in the army is from syphilis, and this is not included in the other observations. In the English army—cavalry, foot-guards, and infantry—Mr. Finlaison has estimated the numbers of sick, in the years 1823-4, as somewhat more than 4 per cent.

The sick time in Madras, remarks Mr. Farr, in 1808-9 was 12·4 per cent. of the lifetime. Annesley considered 10 per cent. in that climate unhealthy; and this appears to be near the mean proportion of European troops constantly sick in the East Indies. In places where the mortality is high, the rate of sickness fluctuates very much from year to year; and, exclusive of losses in battle, the mortality and sickness are tripled or quadrupled in a campaign. This kind of knowledge is still imperfect, although indispensable to those who would employ masses of men with effect in different circumstances.

5. *Morbility of the Population.* Passing over some tables, we introduce a rather lengthened extract, which contains the results of many different inquiries.

"The attacks of disease vary in frequency to a great extent in unhealthy and salubrious situations: but the experience of the East India Company's labourers, of the children belonging to the Bennet-street School, which has the best-regulated sick society of any in Manchester, and of the artisans of the Trades Club in Wurzburg, all receiving pay during sickness, and only falling on the funds in cases of some duration and severity, tends to shew that 100 of the efficient male population of this country are not liable to more than 25 severe attacks of disease in the year. Each man is liable to a protracted disease, disabling him from work, every four years: this forms one great section of the sickness of the country; but it does not include syphilis, accidents from fighting and drunkenness, or the many ailments which make men apply for medical advice, while they carry on their occupation, comprising, perhaps, as many more cases of a slighter character, which raise to 50 per cent. the proportion of the population attacked annually. In the Portsmouth dockyard 37·8 per cent of the men fall ill, 16 per cent. meet with accidents in the year: besides accidents, the attacks of sickness in Sheerness amounted to 43·7 per cent. The reported attacks of sickness in Sheerness are exclusive of accidents; and if, as is probable, the same exclusion was made in the other returns, the spontaneous cases amounted to nearly 50 per cent. in Chatham and Pembroke. By excluding the slighter cases the attacks of sickness may be reduced near the level of the preceding series: in the healthiest dockyard, Plymouth for example, out of 2,147 cases, 635 did not exceed three days' duration; and by subtracting these, the proportion attacked in 100 will be reduced from 34·7 to 24·4. Accidents, although excepted here, ought not to be excluded, because they occur as common inevitable causes of disease among all classes of the people, and raise the sickness to a considerable, although varying, extent; in Portsmouth, the increase of cases from this cause was 42 per cent. Except Plymouth, the dockyards appear to fall somewhat below the national standard of health; more than 50 in 100 of the men are attacked by sickness of one sort or other annually. In Sheerness, out of 1,422 cases of sickness, 263 were agues, 142 rheumatisms, 68 colics and cholera. The Report of the Liverpool Society, by the surgeon, Mr. Parr, shews that 57·2 per cent. of the members receive medical advice in the year. Mr. Parr makes a useful distinction between the patients attended at their own houses and those seen at his surgery: the first, not quite comprehending all disabled for work, were

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17·8 per cent., nearly a third of all the patients treated. Among 100 members, 8·6 met with accidents in the year. The return from the Deanston Cotton Works, in Scotland, after deducting cases of less than three days' duration, makes the annual attacks of sickness among males 20, among females 44·8 per cent. This difference between males and females deserves attention; it is produced by rheumatisms, diarrhœas, and even wounds, but more particularly by catarrh and headach. The female cases approach the nearest to the total attacks; as the wages of women are lower, and they give over working abroad on slighter occasions than males. Almost an equal difference is visible in the Lancashire cotton works; in Glasgow the difference is trifling. Females leave off work, and apply for medical advice, more frequently than males; but as the mortality between 15 and 40 is but a little higher, the same must hold respecting severe illnesses. The cases observed in factories, only reported on the recollection of the workmen, would very likely include nearly all the serious diseases, and a varying proportion of the slighter distempers which detained them from work. The attacks of sickness among paupers—the feeble, crippled, maimed, idiotic, crazy, miserable, dirty, dissolute, vicious, unfortunate—rejected as refuse from all the foregoing classes, are more numerous than the attacks to which select labourers are liable; and medical men, in undertaking to attend paupers, should bear this in recollection. For the facts relating to English prisoners we are indebted to a highly interesting paper of Mr. Chadwick, in which, by collating the dietaries of 60 prisons in England and Wales, he has rendered it probable that the lowest prison *diet* does not increase sickness. An accurate return of the average population of the prisons, the ages of the prisoners, the diseases and deaths, the amount of labour performed, and information concerning the ventilation of the cells, will, in a few years, settle this question: the average population in this table was assumed to be furnished by the numbers remaining at five times in each of the 60 prisons.

We are unacquainted with any data from which the absolute morbility of the British population can be deduced, any more than the mean duration of each case and the mortality of the sick, with which it is intimately connected. Several interesting observations on distinct classes, and on the morbility and duration of sickness at different ages, however exist. At the age of 20-50, the duration of each attack among the East India Company's labourers was 22·2 days, and with the pension time 36 days: 7·8 in 100 cases died, or 7·4 exclusive of pensioners. The duration of these cases approaches very near the term of treatment in 14 Paris hospitals, where patients are admitted indiscriminately and continue till they recover or die; in 1819-1825, the mean number, 3,947 patients, remained 35 days. In the hospitals of this country, where adults and more chronic cases are received, but at the same time are often sent out before death occurs, the patients continue longer under treatment; in the county hospitals (31) of Ireland, 38·3 days; of England, 39·4 days; of the metropolis, 42 days. Where slighter and ephemeral cases are counted, and organic diseases are excluded, the duration of cases among adults does not, according to the returns from the dockyards, exceed 12 days. In Corfu, 1816-1821, the mean duration of all the diseases (14,098) was 16·1 days.

It is of great importance for medical men to know the average number of deaths in all the cases that come under their care, in order to judge of the remedial influence of medical appliances. The hospitals furnish some, although inadequate information on this head. The sanability of the sick appears to decrease in the large cities; partly, it may be, because more serious accidents are admitted." 583.

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Hospitals.	In-Patients treated in 1 Year.	Mean Number of In-Patients.	Deaths.	Deaths out of 100 Patients.	Deaths in 36·5 Days out of 100 Patients.
Salop, 4 years (1830—33)....	955	92	34	3·7	3·6
Winchester, 1 year (1833—34)	798	83	31	3·8	3·7
Salisbury, 1 year (1833—4) ..	894	88	27	3·1	3·1
Chester, 2 years (1833—5) ...	489	45	20	4·2	4·5
Manchester, 1 year (1831—2)	1,784	128	128	7·2	10·0
Liverpool, 1 year (1831)	1,960	220	109	5·6	5·0
Bristol, 1 year (1828—9)	1,483	195	160	9·5	8·2
London, 7 hospitals.....	18,740	2,191	1,605	9·0	7·6

Men placed under the same circumstances, appear equally liable to an attack of sickness between 11 and 60 years of age; 100 of the London labourers, in each of the decennial periods between 20 and 60, had nearly 23·5 attacks of sickness annually.

Two other positions are laid down:—1, That the mean duration of each case increases as age advances; 2, that the mortality among the attacked augments with age, at the same rate as the mortality among the entire number living.

"The sick time increases with age in a geometrical progression. If, therefore, the number of attacks at each age be the same, the duration of each attack will increase in the same ratio; and conversely, if the duration of the cases and the sick time augment at the same rate, the number of attacks at every age will be equal. Any two of the elements being given, the third may always be deduced from them. Again, if the mortality of the attacked increase at the same rate as the mortality of the entire population, the proportion attacked at every age will be the same. Among the London labourers, the mortality between 30-40, 40-50, was 1·48, 2·43 in 100 living; the mortality among 100 attacked was 6·5, 10·4. Now 1·48 is to 2·43 very nearly as 6·5 is to 10·4; and it results from this that the attacks, whatever their absolute number may be, whether 22 or 52, were the same in both periods." 585.

6. *Diseases.* There is not much in the observations upon these to give us pause. The writer enters into a calculation to shew that, if the same number of persons died by ordinary chronic diseases, who at times die from short and epidemic ones, a vast deal of misery and a great deal of inconvenience would ensue. As this may readily be granted, we pass on. Has insanity increased? The returns are yet unequal to the solution of this question, for an obvious source of fallacy sticks to them. Formerly, the gross ill-treatment of lunatics must have shortened their existence. Now they live longer, and, consequently, more will be alive at a given time, independently of an increase of numbers relatively to the population. The same fallacy applies to the present estimates, between the numbers of insane in town and country. The superior longevity of the latter may similarly and deceptively swell their numbers. Sir A. Halliday calculated that, in England, 1 in 1000 of the population is insane—in Wales, 1 in 800—and, in Scotland, 1 in 574. But a calculation, more exact in its data, of the mad amongst the Quakers, makes *them* amount to 3·4 in 1000—and perhaps

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this is an approach to what obtains among the more opulent classes in England.

In the paper of Mr. Palmer, we find some further observations on insanity, which we may here introduce. The points to which we shall advert are, the diminished mortality of lunatic asylums, and the comparative frequency of the disease in men and women.

It appears (says Mr. P.) by nearly all the returns of Europe, excepting France, that men are more prone to insanity than females, in the proportion of 100 to 77 : but this apparent discrepancy may, perhaps, be referred to the delicate feelings of relatives, who object to the idea of placing the female branches of their families in public asylums, especially as they are more easily controlled at their own homes or in private families. The proportion of females cured at the Bethlem Hospital, during the last 15 years, has been 47·0 per cent.; and at St. Luke's, 44·8 per cent.; the respective numbers for males being 39·6 and 41·3.—Of 997 curable patients, admitted at the former, from 1830 to 1834 (inclusive), considerably more than half were between the ages of 20 and 40, or precisely at that period of life when the passions acquire their greatest ascendancy. The mortality, during the same period, was a little less than 1 in 25, which is surprisingly small, when we consider that many of these labour under actual organic disease of a vital part. Of the recoveries, nearly one-half took place within the first six months.

In connexion with insanity, we may not unnaturally glance at the suicide. Is he more frequently an Englishman than a foreigner? Popular credulity, Continental abhorrence of our customs and our manners, and our own paradoxical love and abuse of our country, our climate, and ourselves, have stamped self-destruction as a national characteristic, and as the peculiar offspring of the gloom and fogs of November. Exact investigations absolve us from this national weakness or crime, and prove that we are less suicidally inclined than the German or the Frenchman.

About 100 instances only of suicide annually occur in the metropolis. From 1812 to 1824, continues Mr. Palmer, the total number of suicides for the City of Westminster was only 290, or 1 in 8000—a proportion at least three times inferior to that for any of the great cities of France or Germany; and if allowance is made for the extreme dissipation of many parts of this city, we shall not be far wrong in considering 1 in 10,000 a medium proportion. In Prussia, the civic cases are to the rural as 14 to 4. The propensity is stronger in the male than in the female, as 5 to 2, in this country, and 2 to 1 in France. Many curious examples are recorded of the influence of imitation, in determining the thoughts to suicide, especially of those who are predisposed. The shocking recital of horrible cases in the newspapers, is attended with this effect. It has occasionally become necessary for the public authorities to interfere, and either to deny the rites of Christian burial, or to expose the corpse to some indignity, in order to arrest the progress of a suicidal contagion. Dr. Caspar relates the existence of a suicidal club in Prussia, consisting of six persons, all of whom accomplished their purpose; and a similar club is said to have existed in Paris not long since, the members of which bound themselves by a regulation that, every year, one of their number should be selected to destroy himself as a testimony of their sincerity. Among the causes of suicide, sheer misery holds a prominent place; next to that, domestic unhappiness; then reverses of fortune, disap-

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pointed love, and gambling. A great number of attempted suicides arise from the loss of female honour, accompanied by the prospect of pregnancy. It is remarkable, that this disposition is far more predominant in Protestant than in Catholic communities. In Spain it is so extremely rare, that for the whole of 1826, only 16 instances were officially reported. From 1812 to 1824, the suicides committed in Westminster, in the months of June, were 34, and those in the months of November, 22. In 1812, 1815, 1820, and 1824, the months of November did not afford a single case.

We are next presented with tables, exhibiting the fatal diseases of London for the last two centuries. They are distributed in six columns, and embrace the following periods of time. Column A is deduced from 65,706 observations, made in the seven years, 1629-35. Col. B, from 426,253 diseases, recorded in the twenty years, 1660-79. Col. C from 732,873 deaths, occurring in the thirty years, 1728-57. Cols. D and E each embrace periods of ten years, 1771-80 and 1801-10. While col. F presents the results of the five last bills of mortality, 1831-5, and the actual fatal diseases of London, so far as they are shewn by the present system of registration. The table containing these six columns, exhibits the relative fatality of a vast number of existing, and of many forgotten diseases. Thus, the "chrisomes," "overlaid," "mold-shot head," "liver-grown," "griping of the guts," "rising of the lights and mother," "jaw-fallen," "planet-struck," raise their grisly and portentous fronts in the old bills, but, pressed by modern science and nomenclature, slink out of the new.

This table is too long for us; but there is another, equal in interest, and superior in conciseness, which displays the fatality of the principal diseases in the several periods we have mentioned. The observations are made on 100,000 living in each period, and the whole mortality, as well as the particular, are shewn.

[*See Table on the following page.*]

We observe, first, that the whole mortality has materially decreased. Fever, plague, dysentery, cholera, (with the exception of the late epidemic,) and small-pox, have diminished in a striking manner. Measles and scarlet-fever have increased, yet, as Mr. Farr observes, the mortality of all three diseases—of small-pox, measles, and scarlet fever conjoined, is only half as great as that formerly occasioned by small-pox alone. Fever has declined in nearly the same ratio as small-pox. Consumption has decreased. It would appear that fevers and consumption prevail together. It is very prevalent among the British troops in the West Indies. We know that the same causes tend to produce both fevers and consumption. Insufficient food and clothing, and exposure to wet and cold, are prolific sources of both.

7. *Fatal Diseases at different Ages.* The data for establishing this desirable information are not numerous. But the accurate registration which the working of the Act lately passed ensures, will speedily remedy the deficiency that we complain of. Seven tables, founded on the data that we have, are given in the work before us. But they are too long for us, and their insufficiency will justify our neglect of them. From the remarks appended to them, we shall make two extracts.

1. "What is the effect of the selection exercised by the assurance companies?

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TABLE, showing the mean annual Number of Deaths in London produced by 20 Classes of Disease out of 100,000 living.

By	A. 1629—35.	B. 1660—79.	C. 1728—57.	D. 1771—80.	E. 1801—10.	F. 1831—5.
Chrisomes, overlaid, convulsions, worms, teething, mold-shot head, dropsy on the head, inflammation of brain, rickets, livergrown, canker, thrush, croup, hooping-cough	1,681	1,591	1,827	1,682	789	625
Small-pox	189	417	426	502	204	83
Measles	16	47	37	48	94	86
Scarlet-fever	.....	.....	.....	.....	.....	53
Fever	636	785	785	621	264	111
spotted	45	90				
Plague	125	1,223				
Dysentery	221	894	50	17	1	1
Surfeit or cholera	63	148	1	.....	.....	135
Inflammation	.....	.....	10	31	101	307
Pleurisy	14	6	10	5	4	39
Asthma and phthisic	.....	.....	112	85	89	136
Consumption	1,021	1,255	905	1,121	716	567
King's evil, scrofula	14	19	5	5	.....	3
Dropsy	146	349	218	225	131	133
Apoplexy and suddenly	47	30	48	55	49	59
Palsy and lethargy	14	17	12	18	19	28
Old age, bedridden	370	388	415	324	241	357
Casualties	65	76	86	70	40	57
Childbed and miscarriages	80	100	43	47	32	43
Unknown causes	.....	.....	.....	.....	.....	88
Other diseases	253	565	211	144	146	289
Deaths in 100,000 living	5,000	8,000	5,200	5,000	2,920	3,200

What class of diseases does it exclude? In the first place, the eruptive fevers. Among 4,095 deaths in the Equitable Society, only 1 was of smallpox. The deaths from consumption, instead of making 20, only amounted to 8·3 per cent. of the deaths, or 10·3 if those who died of ruptured bloodvessel be added. But by way of compensation, the deaths from dropsy are 22; from apoplexy and palsy 37 per 1000; instead of 11, 12, and 11, 10·6, the proportions dying of these two classes of disease in Carlisle and Philadelphia. The advantage to the assurance offices of applying tables founded on a city population in the last century, and *including all the sick*, to a class of persons in good health, and little

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liable to the eruptive fevers or consumption, is obvious. With a little study, the selection of long-lived persons may be carried to a still greater extent." 600.

2. Life, divided into five vicennial periods, is most secure in the second; the fatality of nearly all diseases increases afterwards in a geometrical progression. Even consumption is not an exception to this law.

3. With the civilization of a people, apoplexy increases. This is apparently not difficult of explanation. Apoplexy is, in the great majority of instances, the consequence of diseased cerebral arteries, and the latter usually coexist with hypertrophy of the left ventricle of the heart. In civilized life, the exertions of the brain, and the influences of the passions on the heart, multiply to an almost incalculable extent. What wonder that both should suffer in their organization?

" One of the most important results presented in this paper is, that the character of diseases changes in a determined ratio at different periods of existence. The tables indicate not only the degree, but the kind of danger, we have to encounter at all ages: for example, in the second vicennial period (20—40), the deaths from consumption at Carlisle constituted 50, at Philadelphia 34, in the Equitable Society 26 per cent. of the deaths from all causes; in the third vicennium the nature of the danger has altered, for the deaths from consumption contribute but 23, 28, or 11 per cent. to the entire mortality. From tables of this description, the probability of death from each class of diseases can be calculated at all ages. We will add one instance of their practical application. In the first period of life (0—20) the eruptive fevers, inflammations, scrofulous and dropsical effusions, are most to be dreaded; in Philadelphia two-fifths of the deaths were from affections of the brain and bowels. Who, with these facts before him, can fail to see the impropriety of giving children preparations of laudanum, spirits, or any food at first but the mother's bland milk? Cold often produces inflammation of the lungs in winter: but too much tenderness in this respect, and the accustoming of boys to a delicate diet, weaken the constitution. Between 20 and 40, *consumption*, inflammations, fevers, and epidemics, are the most deadly shafts of death, which, as Dr. Clark has shown, a judicious course of hygiene in this period may do much to disarm. The same class of diseases maintains the preponderance till 60; but, in the period following (60—80) *dropsies* and inflammations increase, while apoplexy gains a great ascendency. After 65 a man should undertake nothing requiring great intellectual exertion, or sustained energy: warmth, temperance, tranquillity, may prolong his years to the close of a century; a rude breath of the atmosphere, a violent struggle, or a shock, will suffice to terminate his existence. The apoplexy of the aged can, with care, be averted for several years; but it is, perhaps, the natural death, the euthanasia of the intellectual: their blood remains pure, the solids firm to the last, when a fragile artery gives way within the head,—the blood escapes, and by a gentle pressure dissolves sensibility at its source for ever." 600.

We have reached the termination of the chapter. It concludes with a few and but a few " conclusions," which wear, after the long array of figures and of facts, a rather lame appearance. They may be readily summed up. *That* governments should ensure an accurate registration—*that* all classes are ignorant of physiology, and that therefore the works and inventions of Rumford and of Arnott will be useful—*that* prevention is better than cure, and quite as easy—*that* the medical institutions of the country should be liberal—*that* " medical writers should renounce the notion that a science can be founded on the limited experience of an individual"—*that* " practical medicine cannot be taught by books, while the science of medicine cannot be

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acquired in the sick room—*that* morbid anatomy is indispensable—and, finally, *that*, the Government, municipal and general, should do their utmost to render towns healthy—are the inferences deduced from the statistical data set forth—inferences, most of them just, but oddly sorted, and some of them not very obviously inferential. The reader in fact is almost tempted to apply to them the pasquinade upon the ill-placed columns :—

> Care colonne che fate quà ?
> Non sapiamo, in verita.
> Ah, my dear columns, what do you there ?
> Of that, we've not an idea, we declare.

The author, in urging the prevention of disease, anticipates and endeavours to parry a professional objection. That objection is obvious and natural. If diseases can be materially prevented, if public hygiene proves as successful as we are told it may, what is to become of the present myriads of doctors? Mr. Farr supposes that a modified system of medical education, and of remuneration for medical services, will correct *that* evil, and will fill the gaps in the ledger and the pocket. A sanguine but extraordinary notion. The doctors, like other folks, are paid for work *done*, and it requires but a small share of economical knowledge to foretel, that their payments will decrease when there is little work to do. Fortunately even the statisticians cannot yet prevent epidemics, and once every four or five years at least, the faculty may expect to obtain a good dinner. An iron age is evidently approaching, and we recommend our brethren to seize the present moment, (the influenza is on its wing,) ere it is for ever flown. Pills will soon be a drug, draughts will be dishonoured, the only bills sent out will be bills of mortality, and they will be small and payable long after date. The statisticians themselves will, after a short season, find their occupation gone, and the dead will be too few to afford them a living. That practical philosopher, Mr. Reeve, has anticipated the coming state of the profession, and we must shortly admit with him, that "there is nothing stirring but stagnation."

The article on medical statistics, contained in the Dublin Review, and contributed by Mr. Palmer, is a clear, judicious, and well-written exposition of the causes that have contributed to the extension of human life. Addressed to the public, it is calculated to engage its attention, and to set before it in a plain yet striking manner, the means of securing health and attaining longevity. The length to which this article has run, in pursuing the more elaborate details of the preceding author, precludes the possibility of our going far with Mr. Palmer. We can only select a few points from his paper, which either illustrate those that we have already dwelt on, or supply deficiencies which *they* exhibit.

Mr. Palmer traces with care and satisfaction the causes of the demonstrative augmented value of life—a value higher in this calumniated country and climate than in any other in the world. Those causes are general and medical. Among the former, cultivation of the land and surface drainage—better clothing and better food than formerly—increased commercial prosperity, are the principal, though not the only ones. Those who talk of the "good old times," are probably ignorant of what the real characters of those times were. We would advise them to turn to our English history, and contemplate those ancestors, whose situation they conceive to have been so

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incomparably superior to their own. We may mention a fact or two for the benefit of those who admire so much not only the wisdom but the manners of our ancestors.

It was not till the end of the reign of Henry VIII. that any salads, carrots, turnips, or other edible roots were produced in England. Queen Catharine, when she wanted a salad, was obliged to dispatch a messenger to Flanders on purpose. In Edward the Sixth's reign, which was after Henry's,* Erasmus ascribes the frequent plagues to the nastiness, and dirt, and slovenly habits of the English. "The floors," says he, "are commonly of clay, strewed with rushes, under which lies unmolested an ancient collection of beer, grease, fragments, bones, spittle, excrements of dogs and cats, and every thing that is nasty." Hollingshed gives a lively account of the mode of living when Elizabeth came to the crown, at the close of the sixteenth century. There was scarcely a chimney to the houses, even in the considerable towns, the fire being kindled by the wall, and the smoke finding its way out as it best might. The houses were only watling, plaistered over with clay. The people slept on straw pallets, and had a good round log under their heads for a pillow. Can we wonder at plagues and epidemic fevers prevailing under such circumstances as these; or, when we recollect the filthy woollen under garments, that our ancestors, both the little and the "great unwashed," were under the necessity of wearing, can we be astonished that the present inhabitants of England should enjoy better health, and a longer range of existence, than they did?

To the medical profession itself it would be absurd to dwell on the influence which medical improvement must, *ex necessitate*, have exerted, in effecting the diminution of mortality. Yet there are one or two statistical facts which we may quote. Out of 37 cases of fever treated by Hippocrates, 21, or more than one half, died; whereas, at the Fever Hospital of London, in 1825, the total mortality was less than 1 in 7; and at the Dublin Fever Hospital, from 1804 to 1812, did not exceed 1 in 12. Independently too of the decrease of the number of cases of small-pox, the diminution of fatality in the cases that do occur is gratifying. From 1794 to 1798, the mortality, at the Small-pox Hospital of London, was 32 in 100, or nearly 1 in 3; but had diminished, in 1834, to 13 in 100, or nearly 1 in 8, a diminution which must principally be ascribed to the improved medical treatment to which the patients are subjected.

But we must pause. This article has already attained a length which precludes our adverting to further facts. As opportunities occur, we shall return to the subject of vital statistics, and endeavour to disseminate the accurate data and important conclusions that it furnishes.

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* Anno Domini, 1553.

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A PRACTICAL TREATISE ON THE MANAGEMENT AND DISEASES OF CHILDREN. By *Richard T. Evanson*, M.D. Professor of Medicine, and *Henry Maunsell*, M.D. Professor of Midwifery in the Royal Coll. of Surgeons in Ireland. In one Volume 12mo. Dublin and London, Dec. 1836.

WE think there was ample field for a new treatise on the management and diseases of infants. The treatise of Underwood has long been antiquated, nor could all the notes and emendations of his editors make the edifice a sightly or consistent structure. The authors of the work before us have had the advantage of investigating the subject of infantile diseases conjointly in a public institution—an advantage which no private medical man, however extensive his practice, could probably have. The observations being made conjointly too, offer a greater guarantee of correctness and authenticity than if they emanated from a single source, however respectable. From their acquaintance, also, with foreign works, they have been able to bring up the anatomy, physiology, pathology, and even therapeutics, to a far higher level than is to be found in any previous work in the English language.

The volume is divided into 12 chapters, and each bears the signature of its author. The first, by Dr. Evanson, gives a very neat sketch of the anatomy, physiology, and growth of the infant, from birth up to the age of eight years. Upon this chapter we need not, of course, dwell. The second chapter is by Dr. Maunsell, and embraces the management and physical education of children. This chapter ought to be printed in gold letters, and hung up in the nursery of every family. It would save many lives, and prevent much suffering. We are tempted to make a short extract from this chapter, on the injurious effects of frequent mercurial purges, given to infants by mothers and nurses.

"And as the multitude has, in the case of the system in question, but one idea cognate with either remedy or preventative, viz. the idea of purging, the propriety of adopting a regular system of purgation with healthy children, has been admitted almost without question. There cannot, however, be a more dangerous absurdity than such a system; and in proof of our opinion, we shall ask a single question, and bring forward one fact. What is the mode of action and effect of every aperient drug in the pharmacopœia? Is it not irritation, direct or indirect, of the intestinal mucous membrane, in a greater or lesser degree; and does it not produce, as a necessary effect, in every instance, a larger or smaller quantity of increased secretion? So much for our question. We presume that no person, but a devoted disciple of St. John Long, will maintain that irritation, producing increase of secretion, can ever be necessary in the *healthy* body. With respect to our fact—let any person with regular, or moderately regular bowels, take an aperient, and he will certainly find that, after its immediate effects have passed away, a state of costiveness will remain. The tendency of nature to periodical movements, has been interrupted by the production of evacuations at irregular periods, and she requires some time to enable her to recur to the simplicity of her original design. We wish it to be distinctly understood, that what we are now advancing has no reference to the *use* of purgatives in disease, but solely to their *abuse* during health; and we are the more particular in endeavouring to convey our own views upon the subject, because we know that the impropriety of a needless resort to medicines of this kind, is

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not sufficiently thought of by medical men. We have, indeed, too often had occasion to lament over the display of drugs upon the mantel piece of even a medical man's nursery, not to feel special interest in this matter. The least judicious would surely grieve, did he see an ointment of cantharides rubbed to a healthy skin, with no other apparent intention than that it might be followed by a healing salve; yet, what less absurd, is portended by the accumulation, in such a situation as we have alluded to, of packets of aperient draughts, bundles of restraining powders, and bottles of carminative mixture—all designed for the same unlucky children. This is no imaginary description, we have but too often seen its original; yet, better and more merciful would it be, towards many of the victims, to destroy them in the birth, than, by such a course, to provide for them the enduring miseries of an irritable intestinal mucous membrane." 71.

Upon the mental cultivation of infants, Dr. M. makes some judicious observations. The exact time for commencing the communication of scholastic knowledge cannot be easily determined. He conceives that it should not be begun before the sixth year. The practice, however, is very different among all classes of society. The child is often drilled and harassed with book-learning from four years upwards. We make no apology for introducing the following extract from the second edition of the "Economy of Health," by Dr. Johnson, on the same subject.

"I have alluded to the Spartan custom of leaving the youth, during the first seven years, under the guidance of the parents, who permitted the physical powers of their offspring to develop themselves without control. What is the case with us? During a considerable portion of that period the youth is 'got out of the way,' and imprisoned in a scholastic hot-bed or nursery, where the 'young ideas,' instead of being left to shoot out slowly, are *forced* out rapidly, to the great detriment of the intellectual soil, thus exhausted by too early and too frequent crops." 14.

"The first seven years of life must not be given up entirely to the physical development of the constitution; though that is a most important part of the parent's duty. A great deal of moral culture may be effected in this period: but I apprehend that it ought to be very different in kind, in mode, and in degree, from what it is at present. During several years of this first Septenniad, the children of the lower, and even of the middle classes, are cooped up in a crowded and unwholesome school-room, for many hours in the day, to the great detriment of their health and morals, and with very little benefit to their intellectual faculties. Among the higher classes, it is not so bad; yet there, the children are too much drilled by tutor or governess, and by far too little exercised in body.

The principle which I advocate is this: that during the first, and even during the second Septenniad, the amount of elementary learning *required* should be less, and the daily periods of study shorter;—that sport and exercise should be the regular and unfailing premium on *prompt and punctual* acquisition of the lessons prescribed—in short, that elementary education should be acquired 'cito, tutò, ac jucundè'—instead of being a wearisome task, irksome to the mind, and injurious to the body.

But if I declare myself adverse to the system of precocious exercise of the intellect, I am an advocate for early moral culture of the mind. It is during the first years of our existence that the foundation of *habits* and *manners* is laid; and these will be good or bad, afterwards, according to their foundations. ORDER is truly said to be 'Heaven's first law'—and so it should be the first injunction on childhood. The brightest talents are often rendered useless by the want of order and system in our amusements, studies, and avocations. The best temper or the purest intention will not compensate for want of regularity, industry,

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and punctuality. HABIT is the result of *impression*, rather than of *reflection*; and youth is the age for receiving impressions, rather than for exercising the judgment. ORDER may be instilled into the juvenile mind, long before that mind is capable of perceiving the utility of the discipline; in the same way that the rules of grammar are learnt, before the application of these rules can be even imagined by the pupil. From long study, and, perhaps, a considerable knowledge of human nature, I most earnestly exhort parents, guardians, and tutors, to enforce, with all their energy, the most rigid system of ORDER, REGULARITY, and PUNCTUALITY, from the very earliest period of infancy up to the age of discretion. Half, and more than half of our miseries, crimes, and misfortunes, in after life, are attributable to the misplaced indulgence, or culpable negligence of our parents. 'Spare the rod and spoil the child,' is a maxim that was founded in experience, though it has been nearly exploded by speculative philanthropists, not deeply versed in the knowledge of man. The rod, in most cases, may be spared; but, if order and obedience cannot be enforced by other means, the rod should be applied.

The whole material world, and, as far as we can judge, the whole universe, is subjected to, and governed by, certain laws of periodicity, which preserve order and harmony everywhere. Our mental and corporeal constitutions are controlled by similar laws of periodicity, and we should subject all our actions, passions, pleasures, and labours to laws, in imitation of those which Nature has established. Thus in infancy and youth, the sleep, exercise, play, meals—every thing, in short, which is done, should be done at regular and stated periods, and the habit of regularity, thus early established, would become a second nature, and prove a real blessing through life. There is not a single office, profession, or avocation, from the high duties of the Monarch down to the vile drudgery of the dustman, that does not owe half its honours, respectability, and success to PUNCTUALITY."* 20.

We are rather surprised that the talented author has omitted all allusion to these habits of punctuality, which are best acquired at this early period of life.

The third chapter is on "the peculiarities of disease in infancy and childhood." It is divided into three parts—etiology, diagnosis, and prognosis.

1. *Etiology*. The great activity of the circulation, and the high susceptibility of the nervous system, predispose children strongly to acute diseases, which will, of course, be rapid in their progress and violent in their degree. But the same peculiarities confer on the organs and structures of the infant a remarkable energy and power of reparation. Irritation is easily set up in a child, and is quickly spread, from organ to organ, by sympathy.

"The most common seat of direct irritation is in some part of the alimentary canal, and this generally arises from the ingestion of unwholesome aliment. The presence of any irritating matter there gives rise to symptoms often very formidable, particularly when it occasions sympathetic disturbance in the brain. The intestinal mucous membrane itself soon takes on the irritative action, and becomes the seat of disease; the attendant symptoms generally assuming the type of remittent fever. The suffering caused by difficult dentition is a familiar example of direct irritation, which, though slight in itself, may lead to most serious results." 87.

The brain, the lungs, the liver, all sympathize with irritated digestive or-

* Economy of Health, p. 20.

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gans in children—and, indeed, at all ages, though not so vividly or acutely as in infancy. Mental impressions, for obvious reasons, with the exception of fear and anger, are not so operative at this as at later periods of existence. Impressions of cold and damp are fertile sources of infantile illness; but our author very properly dissuades from the general use of flannel in early life. It should be reserved for ulterior stages of life.

2. *Diagnosis.* After drawing a portrait of a child in health, the author gives one of an infant in a state of disorder or disease.

"Not so with the child when ill: it is more or less peevish—dislikes being stirred, or even cries when handled; its hour of sleep is uncertain, and it rests ill, or awakes startled or crying. The skin is hot and dry, particularly of the hands, feet, and head. The flesh is soft or wasted. There is thirst, with unnatural appetite and depraved secretions.

When a sick child is brought to us, or we visit it, our attention should first be directed to the expression of the countenance, then to the attitude, state of the limbs, and skin. We next proceed to examine more minutely into the several symptoms—to determine the seat of the disorder, whether in the head, chest, or abdomen—and its nature, or the particular lesion on which it depends.

When the brows are knit, the eyes fixed and staring, or looking wild or vacant, our attention is at once directed to the head. We try whether it is unusually hot, the vessels full or in over-action, and examine the fontanelle, to see if it be depressed or in a state of distention. We now observe the attitude, and see whether the child's head hangs heavily on the nurse's arm, or rolls from side to side, sunk upon the pillow.* We examine the limbs, to see whether they be rigid or relaxed—lying motionless, or tossed about, and affected with spasm—in particular, we try whether the hands are clenched, and the thumb turned in, or toes bent. According as the upper or lower extremities are affected, one or both, we judge of the seat and extent of the disease. The state of the pupil next demands investigation. It may be found contracted, and the child will start, as if frightened, or scream out, on being touched; or the pupil may be dilated and insensible to light—the child being motionless or unconscious. We will hear that the child has had starting in its sleep, grinding of the teeth, or movements of the lips; and when awakened, it started up affrighted or screamed out; the bowels are obstinately costive, or the evacuations very foul and dark coloured. The hands are usually hot, but the feet cold; and one cheek is often deeply flushed. No doubt can now exist that the head is the seat of disease; but what that particular disease may be, and whether a primary or secondary affection, is to be determined by symptoms hereafter to be detailed in their proper place." 97.

3. *Prognosis.* In children, all acute inflammations are highly dangerous. Trismus nascentium is almost always fatal, and so are some kinds of hydrocephalus. Syphilis may always be cured, or nearly always. If a child survive the first or acute stage of a disease, there are strong grounds for hope.

Chap. IV.—Infantile Therapeutics.

Long ago, Gaubius tried to arrange the doses of medicines according to age, and expressed in a tabular form, thus:—

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* "Occasionally the neck is stiff or retracted."

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"Dose for an adult,	.. ..	1 say	1 drachm,
for a child 7 years old,	..	½ —	1 scruple,
——— 4 ———	..	¼ —	15 grains,
——— 3 ———	..	⅛ —	10 grains,
——— 2 ———	..	⅛ —	8 grains,
——— 1 and under,	1-12 to 1-15	—5 or 4 grains."	106.

On mercury, opium, and other remedies, there are many judicious observations in this chapter; but we cannot dwell on them here.

The fifth chapter is on accidents and diseases occurring at the period of birth, or shortly afterwards. This and the sixth chapter, on dentition, must also be passed over, as too elementary, and incapable of analysis. In both chapters, however, the young practitioner (perchance some of the old folks) will find much valuable information.

CHAP. VII.—DISEASES OF THE DIGESTIVE ORGANS.

Inflammatory affections of the gastro-intestinal mucous membrane are the most common. Our author treats of the different kinds and localities—the aphthous, erythematous, exudatory, &c. We can only spare room for a short extract from this chapter—though it is one of the longest and most important in the whole work.

"A particular form of gangrene of the mouth, without any preceding inflammation, occasionally attacks infants, especially such as are very feeble at birth, or broken down by disease. An œdematous circumscribed swelling appears on the cheek, with a central point more or less hard, over which occurs a dark red spot. This spot may appear on the inside or outside of the cheek; and the skin over the œdematous part is characterised by an oily appearance. An eschar forms from within outwards on the central point; and the soft parts mortify, often extensively, down to the bone, so that the parietes of the cheeks and gums are destroyed—falling off in shreds, mixed with a dark sanguineous fluid, and accompanied by a very fetid odour.

No disease can be more frightful or formidable, than sloughing of the mouth in children. Recovery seems impossible, when once the disease has set severely in, the child sinking beneath the constitutional disturbance, independently of the local ravages of the disorder—which, however, are often such as to render recovery not to be desired, so frightful is the deformity necessarily entailed. The fever, which may be at first high, soon sinks into low typhus; the bowels become greatly deranged, and diarrhœa often attends at the close." 223.

This chapter embraces a great variety of disorders, as enteritis, iteitis, cholera infantum, remittent fever, worms, dentition diseases, &c. all of which are important to the medical practitioner.

The eighth chapter treats of diseases of the respiratory apparatus, and, like all the others, is very skilfully handled. It is too elementary, however, for an analysis. The following remarks on Dr. Ley's ingenious theory of laryngismus stridulus, may not be inopportune.

"More recently, Dr. Hugh Ley has published a lengthy essay upon spasm of the glottis, or laryngismus stridulus, as he terms it, in which he refers its cause to enlargement of the bronchial or deep cervical lymphatic glands, producing pressure upon the recurrent nerves, and consequent paralysis of the muscles supplied by them. Without going into a consideration of Dr. L.'s theories, it will be sufficient to say, that the affection is too constantly curable, and too frequently yields to a removal of specific irritations, as from dentition, deranged bowels, or

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indigestible aliment, to admit of its being referred to a cause so decidedly organic. That enlarged bronchial and cervical glands are frequently met with, as complications, we have no doubt; but when we recollect that the subjects of the complaint are usually of a delicate and strumous habit, such appearances are not to be looked upon as of much importance in relation to its special pathology. These remarks equally apply to the other hypotheses we have alluded to; and, therefore, we are inclined to adopt Dr. Marsh's view, and consider spasm of the glottis as essentially a spasmodic affection, but one liable to many organic complications, both accidental, and consequent upon the continuance of irritation which it occasions in the system." 359.

Our readers are aware that the above opinion corresponds with that which we have expressed in the review of Dr. Ley's very ingenious and clever work.

In respect to the pathology of hooping-cough, we have the following not very consolatory statement.

"Morbid anatomy has thrown no light upon the proximate cause of hooping-cough; and accordingly, as is always the case in the absence of exact knowledge, the subject is deluged with a flood of hypotheses—none of which, however, can claim to be more than plausible guesses: many are merely a restating of ignorance, in obscure, and, therefore, according to the notion of some, scientific words. The fact is, the simple disease is probably never fatal; and, therefore, any appearances which we may meet with in the dead body are the results of complication—*e. g.* marks of inflammation in the lungs or brain." 366.

This doctrine will apply to more diseases than hooping-cough. The following short extract, respecting the treatment, contains sound advice.

"During the whole progress of a case of hooping-cough, we must be alertly upon the watch for the first signs of local inflammations. The most common of these is bronchitis, the symptoms and treatment of which are detailed under their proper head. When it does supervene or threaten, it must be met by active depletion and loss of blood, general or local, according to the symptoms; and from this practice we are not to be deterred by any preconceived ideas as to the nervous or spasmodic nature of the disease. We cannot too often repeat, that the great danger of pertussis arises from the likelihood of the supervention of local inflammations, requiring active and prompt treatment." 371.

The ninth chapter is on the exanthemata, and consists of solid elementary instruction, brought up to the level of the present state of our knowledge of the eruptive diseases. Scrofula, rickets, pemphigus, and diseases of the cerebral system, close the work.

Although our authors have had a wide field for their personal investigation of infantile diseases, yet the work is not so much characterized by *originality*, as by the judicious use which they have made of the labours of others. They have good judgment—and, by that most important instrument, they have been enabled to *compile well*—a task nearly as difficult as to *compose* well. They have woven an excellent and lasting tissue or web from yarns spun by others, and thus furnished the busy practitioner, at a small expense of money and labour, with a manual of infantile diseases, brought up to the very highest level of modern science.

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A CLINICAL TREATISE ON THE ENDEMIC FEVERS OF THE WEST INDIES, INTENDED AS A GUIDE FOR THE YOUNG PRACTITIONER IN THOSE COUNTRIES. By *W. J. Evans*, Esq. M.R.C.S. Octavo, pp. 309. Churchill, London, 1837.

THE object of our author is very laudable—though, perhaps, of difficult attainment—"to exhibit the cases (of endemic fever) as they have occurred to me in all their varieties—to detail faithfully their symptoms—to expose the appearances that the different organs presented after death—and to explain, as far as I am able, the physiological operation of the producing causes." This is indeed an arduous task! The author considers that all the diseases of the West Indies, included under the term "*fever*," may be traced to one of three sources—malaria, solar heat, and contagion. The topography of St. Lucia is then introduced, to exemplify the two first causes—the third, contagion, he has never witnessed.

In the third chapter is given a succinct account of all that is known respecting that mysterious agent—MALARIA—an agent hitherto inscrutable in its nature, though but too well recognized in its deleterious effects on the human frame. Our author divides the physiological effects of malaria into two heads—its agency on the acclimated and unacclimated population. We here introduce a short extract from the first division.

"The inhabitants of marshy countries, where the temperature is moderate, present the following appearances:—The skin is pale, livid, or yellow, the eyes dull and heavy, the movements of the body slow and languid, the eyelids and face puffy and somewhat swollen, or shrunk and wrinkled at an age when they ought not to be; the abdomen large, the extremities small, shrunk, and wanting consistence in the muscles; the sensations both of pleasure and pain seem deadened; common events produce little effect, exciting neither joy nor sorrow. They present the lymphatic, or, as it was formerly called, the leuco-phlegmatic temperament, in its greatest development. Cadaveric inspection shews us chronic engorgements or morbid changes of structure in some or all of the viscera. Acute inflammations are rare, but, living in an unwholesome atmosphere, they never enjoy health; they are always valetudinarians. How can it be otherwise, attacked as they so frequently are by intermittent or remittent fevers, which, though so slight as to be treated by the unfortunate beings who have served a long apprenticeship to suffering, with indifference, nevertheless ultimately produce premature old age and death? They suffer from neuralgic affections; sciatica and tic douloureux are common; their blood is thin and watery, giving rise to ulcers of the legs and scurvy.

As we approach the tropics, though the lymphatic temperament still obtains, we find it combined with a greater excitability of the nervous system; and within these regions are added irritability of the skin and of the abdominal viscera. There is a strange mixture of indolence and love of excitement: a wish to be roused from the listlessness of every-day life, but requiring a powerful stimulus to effect it. Slight causes produce affections of the nervous system which terminate in death. Colic, followed by paralysis of some part of the body, is common: and hysteria and other diseases of this class are frequently combined with the ordinary disorders of the country. We can account for this only by admitting a peculiar modification of the ordinary morbific agents, or a peculiar idiosyncrasy in the people." 17.

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The following passage shews that our author is an attentive observer:—

"An European, or a native, after a long residence in a temperate and healthy climate, arriving in St. Lucia, complains of a feeling of weight in the atmosphere—a something which resists the wished-for exertion or exercise. Both his mind and body are oppressed; his intellect is clouded; his spirits are low and desponding, and all pre-existing love of enterprize vanishes. If his residence be protracted he has slight febrile movements, which come on regularly or irregularly, not sufficiently severe to prevent him pursuing his usual avocations, but which nevertheless are sufficient to induce him to throw himself upon a sofa, and require a powerful effort of resolution to combat. In this manner his body may gradually accommodate itself to the climate, but he may consider himself fortunate if he escape so easily; in general, particularly if he be guilty of any imprudences, he feels restless at night, and can only sleep during the cool of the morning; he feels out of sorts; has pains in the back and extremities, as if from fatigue; he complains of headache, sickness, and nausea; and if these symptoms are not attended to immediately, suffers what is vulgarly called an attack of seasoning fever.

When the constitution is affected by malaria in a still more powerful manner, the effects are often immediate, and I will describe them as they occurred to myself. I had occasion to visit an estate in the neighbourhood of Castries about midnight, and my road obliged me to pass the swamp which lies to the north of the town. There was a lovely moonlight, the sky was unclouded, and a heavy dew was falling. On approaching the swamp I was sensible of an extremely disagreeable odour, arising from its emanations, and from the dank and foul vegetation on its surface and in its neighbourhood. I then perceived a peculiarly unpleasant, but indescribable taste in my mouth and pharynx, which produced slight vertigo, nausea, and even efforts to vomit. On my arrival at the estate, which was shortly afterwards, I took a glass of hot punch, with the hope that it would allay the nausea; I was, however, mistaken, for it was immediately rejected, and an ague came on, which obliged me to go to bed, where I remained until the afternoon of the following day. After a profuse perspiration I was enabled to ride to town, though still very unwell. At night the symptoms returned with such severity, as to require a bleeding from the arm and leeches to the epigastrium; by these means the paroxysm subsided eighteen hours after its commencement, and a return was prevented by the free use of the sulphate of quinine." 20.

The terrific effects of concentrated malaria will be seen in this extract:—

"About eight o'clock in the evening two boatmen, after finishing their day's work, before returning home, were occupied in hauling their canoe high up on the beach, close to the most dangerous part of the swamp mentioned above, when they perceived immediately to windward a small cloud of vapour gradually approaching them, and in a short time they were enveloped in it. One of them fell down, apparently in a state of asphyxia, and the other was so affected as to be unable to render him any assistance. The vapour passed away quickly, and the one who had been the least incommoded recovered sufficiently to look after his companion, whom he found lying in the mud, apparently insensible. He continued in this state only a short time, and gradually became sufficiently well to be led home. In the course of the night Dr. Chevalier was called to see him, and found him suffering from an intense ague. The surface of the body was cold, the countenance expressed great anxiety, the pulse was small and scarcely perceptible, the patient was insensible to surrounding objects, and in a state of coma, only interrupted by severe convulsions. The cold stage continued altogether about three hours, and as reaction took place the convulsions subsided; but the coma continued, and alternated with delirium. There was occasional vomiting of mucosities with great effort and apparent pain. Pressure on the epi-

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gastrium made the patient wince and contort his countenance. About eighteen hours from the commencement there was remission, or rather a slight mitigation of symptoms, with a partial return of consciousness; it continued only a very short time, and was followed by another paroxysm, equal in violence to the last, except that the cold stage was scarcely perceptible. The patient died about forty hours from the period of exposure. The body was examined whilst warm; the blood was found fluid, and a small quantity of troubled serum was effused between the arachnoid and pia mater on the surface; the lungs were somewhat engorged, and the stomach intensely inflamed, containing about two or three ounces of blood in its cavity.

The other man never suffered further inconvenience; he said that the vapour had no perceptible smell; that it was warm and moist, like steam, stopped the respiration for a moment, and produced a sense of faintness and trembling of the whole body." 22.

Many other curious and fearful illustrations of malaria in its more deadly states of concentration are given by our author.

Our author's chapter on the effects of solar heat on the animal economy is a good digest of what is known on the subject, with some original observations. The disciples of Broussais consider insolation as almost the sole primary cause of tropical fevers—the excitement of heat on the surface being propagated to the stomach and bowels, and there kindling up fever. Mr. Evans allows this agent a share in the production of fever, but wisely attributes much to malaria.

"The effects of an elevated temperature on the human body are the following:—1st. An accelerated circulation, giving rise to a florid appearance of the blood from the short period of its sojourn in the capillaries; in other respects the properties of this fluid do not appear to be altered. 2nd. An irritation and inflammation of the skin, and a consequent exanthema known by the name of prickly heat, or the lichen tropicus of Dr. James Johnson. 3rd. Excitement of the chylopoietic viscera, particularly the mucous membrane of the stomach and intestinal canal, and the liver. 4th. Irritability of the nervous system."

Again:—

"When malaria is the exciting cause of disease, solar heat is combined with it, and the united effects are more virulent in consequence; though there may be intense inflammation of one or more organs, the general symptoms will not be those of inflammatory fever, properly so called. The blood will probably be found dark, fluid, and uncoagulable.

On the other hand, when inflammation of an organ, as the meninges, arises from insolation, or from some other cause independent of malaria, the symptoms will be those of a local inflammation, more or less modified, however, by this agent, in proportion to the violence of the inflammatory action on the one hand, and on the other, to the extent to which the system may be under its influence. Thus we may have a continued, remittent, or intermittent fever, having its point of departure in a local inflammation.

Not only does solar heat enter into the formation of disease by predisposing the body to receive it, or to be acted upon by morbific agents, but to the *existence* of the most common amongst these, malaria, it is absolutely essential; and, *cæteris paribus*, the one is in direct ratio with the other. In many countries in the north of Europe, the diseases which arise from malaria are almost unknown, and yet in them the marshes are so numerous and so extensive, as to render them perfectly uninhabitable were they exposed to the temperature of the tropics." 46.

Several cases are detailed in illustration; and amongst these are some of intermittent inflammations, which are curious. We shall extract a case of "intermittent pleuropneumony," as a sample.

"Lucille, a girl of colour, aged 23, has been unwell for two or three days

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with what she calls a cold, but has not been confined to the house until yesterday, when she was suddenly attacked with a severe pain in her side, cough, and fever, about nine o'clock in the morning. The symptoms ceased toward evening, and she remained tolerably well until this morning, August 21, 1833, when they again returned. At noon I found her as follows: Pain over the sixth and seventh ribs on the right side, increased on inspiration: dry cough, crepitating *râle* over the seat of the pain; no uneasiness of the epigastrium; bowels regular; skin dry and warm; tongue natural. She had no cold stage, nor was the attack preceded by a sense of coldness. *Diet—demulcent drink; castor oil.* Evening; the patient is perspiring; expectoration on coughing; the pain has subsided; the *râle* is mucous. 22nd. The patient has had a return of the paroxysm; the pain in the side is greater than yesterday; several fits of coughing, with expectoration of small quantities of very viscid mucus; *râle crepitant;* pulse ninety-six. Evening; perspiration, and mitigation of symptoms; expectoration free; the sputa white and frothy; there is still some pain on inspiration; the pulse is eighty-four; bowels open. 22. The paroxysm commenced two hours before its usual period; I saw the patient at noon; she is much worse than she has yet been; the sound on percussion over the seat of the disease is somewhat dull; breathing very painful. Evening; the disease is advancing; there is no appearance of intermission; sound on percussion dull; centre of the diseased part does not appear permeable to air: at least the crepitating *râle* in its neighbourhood hides the sound, if any exists; sputa viscid, adherent, and of a rusty colour, V.S. ʒxvi.; hirudines xx. lateri; decoction of marsh-mallow, in which antim. tart. gr. vi. are dissolved for drink. 24. The patient is better: to continue. Evening; amelioration very great; great prostration from the effects of the antimony, of which the patient has taken nearly eighteen grains. 25. Expectoration free; *râle* mucous; pain nearly gone; pulse seventy, small. To take the medicine only now and then. 26. Convalescent." 55.

We are inclined to demur to this example of "intermittent inflammation." No doubt the thoracic *inflammation* was aggravated whenever the intermittent *fever* came on; but we do not believe that the actual inflammation ever intermitted in its course, till convalescence was established. If it had been a real intermittent inflammation, why was not bark or arsenic employed?

A case of intermittent rheumatism is given at page 55, which, in our minds, is at least equivocal. We know that acute rheumatism will be one day in one joint, and another in another; but this is metastasis rather than intermittence.

Case IX. of "*intermittent peritonitis,*" is certainly more specious than any of the others; but still, a perusal of it inclines us to think that the inflammation went on steadily, from beginning to end of the case, and that the *painful phenomena* only, were suspended occasionally when the *fever* itself intermitted. The case, however, we shall present to our readers for their attentive consideration.

"A. V., aged 25, of a nervo-sanguineous temperament, superficial veins very much developed; native of the West Indies, but has resided until within a few months in France. Plunged into cold water when the body was very much heated, and shortly after eating a copious breakfast; immediately felt a general uneasiness, and vomited his breakfast; he was then seized with colicky pains of the belly, which continued nearly the whole day; in the night these pains became continued, and fever was not long in making its appearance. The following morning I saw him: the patient complains of considerable pain throughout the whole of the abdomen, nausea, violent efforts to vomit, skin hot and dry; no

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evacuation of the bowels for two days; pulse full, and 100 strokes in a minute; no head-ache; urine high-coloured, and small in quantity; the abdomen is very slightly distended, and extremely painful on pressure. V. S. ʒxvi. statim, castor oil; hot fomentations to the abdomen. Evening; the patient seems nearly well; the skin is moist, the pulse quiet, and the pain in the abdomen gone; he can bear pressure, though a little sensibility still remains; the bowels have not been opened; the castor oil was returned.—To take calomel, gr. x. to-night, and a black draught early in the morning. 20th. Noon; I have again been sent for, as all the symptoms returned at ten o'clock this morning, after an intermission of twelve hours; skin intensely hot and dry; pulse 108, full and hard; abdomen extremely painful; the weight of the sheet is almost insupportable; vomiting of bilious matter; great thirst. Bowels have been freely opened. I must confess that I feel a great deal of astonishment, as I looked upon the disease as completely vanquished last night, and little dreamed of its return in so severe a form. I considered it a case of peritoneal inflammation, from hyperhemia of this membrane, consequent upon the sudden constriction of the cutaneous capillaries produced by the cold bath. The blood taken away yesterday was very sizy. Bleeding repeated; hot fomentations; barley-water. Evening, blood cupped, buffy. As the patient could not bear the weight of the flannels, his friends put him into a warm-bath, which procured some relief; but he is still much in the same state as this morning, and there is now evidently a gastrite superadded; the tongue is red at tip and edges; great thirst; vomiting of bilious matters and mucosities, with effort; frontal head-ache, and heat and dryness of the skin. Hirudines xxx. abdom. During the application of the leeches the patient suddenly began to feel relief: the skin became moist, and the symptoms subsided rapidly. To take three grains of quinine every hour. 20th. The patient has passed an excellent night. There has been another intermission, but he has not taken any of the quinine; unfortunately his friends have thought proper to judge for themselves, and I was told that "*le sang est trop échauffé;*" he is now just like a person convalescent. There is a complete apyrexia, pulse soft, 80, skin moist; has perspired freely, and had his linen changed in consequence; but the abdomen is somewhat distended and sensible on pressure, though not much so, nor more than might be expected from the symptoms of yesterday. To take ten grains of quinine immediately, and to have them repeated in half an hour. Noon; all the symptoms returned half an hour after I saw him, and are now as violent as yesterday. To have a warm-bath immediately. The disease being decidedly intermittent, I think it injudicious to repeat the bleeding, as we may expect another intermission to-night. Nine o'clock P. M. I have been obliged to repeat the bleeding. The symptoms are more violent than ever; both the peritonitis and gastritis are most acute. Rep. hirudines. 21st. I have been up all night with this poor person. He has been again bled, and placed in a warm-bath until fainting was produced, but the symptoms have made an awful advance. Has had one stool, about eight hours since, from the use of a syringe. From midnight until about two o'clock in the morning there was a partial calm, and quinine was administered in a clyster, but was soon returned. Since this period the symptoms have gradually but rapidly increased, and at present, one o'clock, P. M., 22nd, he is in the following state: Drooping of the eye-lids, tears escaping on the cheek; extremities cold as ice; chest and abdomen burning hot: the latter distended, and so exceedingly painful as to make the patient scream with agony when moved. He insisted upon having cold water constantly applied, by pouring it from a vessel in which it is kept cool, but cannot support even a linen cloth. Tongue red at edges and tip, dry: pulse rapid and small; perfect consciousness, and aware that the result will be fatal. Rep. hirudines. Mustard to the inside of each thigh; stimulating frictions to the arms and legs. Evening; the friends have requested my opinion, and have begged me to allow them to do what they imagined they were able for the patient, who cannot outlive the night. He died

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at nine, A. M., 23rd November. Sect. cad., five hours after death. Body very stiff but warm, abdomen meteorized. In cutting through the parietes of the chest and abdomen, the skin, cellular tissue, and muscles were dry; that is, no blood escaped from their divided vessels. About ¾ of a pint of fluid were discovered in the abdominal cavity; this fluid was what has been denominated sero-purulent: that is, serum in which molecules of albumen are suspended, giving it a whey-ish appearance. Some of these molecules were of considerable size, resembling shreds of false membrane. The peritoneum covering the abdominal parietes red throughout almost the whole of its extent, and covered with a thin layer of fibrine, adhering in places to its reflections over the intestines, which are inflamed in patches to a great extent. The lower portion of the ilion of a dusky red, friable, and easily lacerated. Rougeur pointillée of the cul de sac of the mucous membrane of the stomach. This organ contained a small quantity of yellowish fluid. All the other organs healthy. Blood has undergone no change; colourless clot on the right cavities of the heart." 58.

As we before remarked, we submit that the inflammation in this case was not intermittent, but only the fever.

Mr. Evans observes that the intensity of symptomatic fever might be expected to bear some proportion to its cause, but this is not the case. "In some of the most acute forms of gastritis which are found in the West Indies, the skin is cold and damp, and the pulse does not exceed 80 or 90." "Neither heat of skin nor quickness of pulse bear any proportion to the severity of the disease." This very fact is subversive of the doctrine physiologique, as far as fever is concerned. It shows that the general symptoms are *not* always dependent on the gastritis, but on other general or particular causes, as insolation or malaria. We know very well that a dose of concentrated malaria will, as it were, paralyze the powers of life, and even destroy it before any reaction takes place. These are the cases in which the gastritis is marked by the general prostration.

We shall extract one more case of "*intermittent irritation of stomach and liver cured by an emetic.*"

"A young man, aged 16, has been labouring under what he calls slight fever for the last fortnight. The paroxysms come on every morning about ten o'clock, and continue until evening; they are not preceded by rigors or even a sense of coldness; on the contrary, after a short period of malaise and slight nausea with occasional vomiting, the patient feels a heat in the feet, hands, and forehead, which soon extends itself over the whole body; he has slight thirst, and the tonge is somewhat red at the edges and tip; there is uneasiness in the epigastrium, particularly on pressure: the bowels are constipated. These symptoms are sufficiently severe to confine the patient to the sofa.—Diet, barley-water.

This simple treatment was observed for three days without producing any change in the patient; he has also had two tepid baths, and his food has consisted of rice, milk, and panado; his only drink barley-water. The mouth is now pasty and unpleasant; there is a constant desire to vomit; the tongue is yellowish and slimy, red at the edges and tip.—To take three grains of tartar emetic in two doses, with an interval of a quarter of an hour between each, and when the effects are over and the stomach quiet, a dose of senna and salts. 10th August, the day following the administration of these remedies; the patient is much better, he has passed an immense quantity of bilious matter upwards and downwards: the tongue is clean.

From this period the fever disappeared and never returned." 62.

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Our author believes that this case was one of erythema of the stomach, and thinks we owe a debt of eternal gratitude to Broussais for the following observation.

"The *sympathetic* symptoms, where the symptoms of gastric irritation are *absent*, evidently demonstrate, although indirectly, its existence."

Well done, Broussais! Well done, his credulous disciples! How are we to know that the symptoms *are sympathetic*, where there are no symptoms in the organ from whence they are supposed to proceed? Was there ever so absurd an argument as that we are to infer the *presence* of a thing by its *absence?* More than one hundred pages of the work are dedicated to the detail of cases of fevers and neuralgic affections, all of which are interesting in themselves to the young tropical practitioner, though we do not agree with the author on all points of theory. His pathological tenets will be easily gathered from the following passages.

"All these cases appear to have a common origin, and to have had for a cause, either existing or predisposing malaria. This agent, though always a predisposing cause, is not, at least in the generality of instances, the immediate or exciting one. We can most frequently trace the paroxysm to something which has disturbed the balance of the circulation or directly produced an irritation or inflammation of an organ. It is in part to the variety of exciting causes that we are to attribute the differences which exist in individual cases; but there are also other and very powerful reasons to be found for these differences, in the constitutions and idiosyncracies of the persons attacked; in the length of time that they may have resided in the country; in their professions and mode of life, &c." 202.

"The symptoms peculiar to the endemic fevers of the West Indies are those known under the name of bilious; thirst, vomiting either of bile or of porracious and mucous fluids, constant nausea; agitation; anxiety; supination; frequent sighing and moaning; tenderness of the epigastrium; frontal headache; heat of skin, and quickness of the pulse. Do not these symptoms indicate a *local origin*, and that the stomach is the suffering organ? What is there deserving the name of *essentiality* about them, more than about those which accompany an inflammation of the pulmonary parenchyma? Should they observe a type purely intermittent, can we feel more repugnance in referring them to an intermittent gastritis or gastro-hepatitis, that in referring the *son mât*, the pain, the cough, the expectoration, the crepitating râle, and the febrile symptoms, to a pneumonia? Though an inflammation of the gastro-enteric mucous membrane is not the only cause of the hot or febrile stage of an intermittent, or remittent, it is by far the most common one; and to the production of the symptoms which form the bilious fevers of the West Indies it is indispensable.

These symptoms, as we have seen, differ amongst themselves according to the circumstances under which they may have been produced. Thus the fever may be caused by exposure to the sun, and set in with a series of phænomena indicative of irritation of some part of the encephalon, and the gastric affection may not make its appearance till afterwards; or it may be caused by exposure to a current of air, and commence with a catarrh or a pneumonia. Not unfrequently it may be traced to the direct influence of malaria, in which case to a local inflammation most generally is added a diseased condition of the blood, which considerably modifies the features of the malady.

When to an intense inflammation of the gastro-intestinal canal is added a diseased state of the blood, we frequently meet with symptoms said to be *peculiar* to the yellow fever, viz. yellowness of the skin, and black vomit. In this form of the disease we have both the symptoms and cadaveric appearances met

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with in animals that have died from the effects of putrid matter injected into the circulation. It generally, but not always, is found in persons who have resided only a short time in the country—when exceptions are observed the cases can almost always be traced to the inhalation of malaria in a concentrated form.

The great and continued elevation of temperature within the tropics gives to all inflammations, more particularly to those of the chylopöetic viscera, a degree of violence and rapidity unknown in the temperate climates. Patients frequently die from the destruction of an organ essential to life in a space of time scarcely credible to those who have not witnessed disease in these countries.

All the diseases which we have examined may be either intermittent, remittent, or continued, and yet preserve their pathological character. It would be impossible to discover at the commencement of many of them, the type which they will assume, and in fact much will depend upon the treatment which may be pursued. Many that were at first purely intermittent become remittent or continued; and of those which set in with violent and continued inflammation of a vital organ, many may be checked or induced to put on an intermittent type by prompt and energetic treatment." 204.

We would say that the symptoms above described do not mark the "*local origin*," but the direction which the fever takes in its course. The foregoing symptoms are not the *primary* symptoms resulting from the malaria or insolation, but the *secondary* ones, which come forth when the functions or structures of particular organs, as the brain, liver, stomach, &c. are invaded and disordered. We might as well consider suppuration as the cause of inflammation, as gastritis to be the cause of fever, where general or malarious causes were demonstrably in operation. Not that we think the doctrine in question makes much difference in practice; for when any organ or part becomes affected in fever, we must attend to *that*, whether originally or secondarily disordered.

In the treatment of West India fevers, Mr. Evans adopts the practice as well as the doctrines of his master, Broussais, with some important modifications. He declaims against the mercurial treatment, and considers it as worse than no treatment at all. We conclude by strongly recommending the work to every medical man who leaves the shores of England for the West India Islands. It is full of instruction for that class of the profession, and indeed contains a great mass of materials that are interesting to the pathologist and practitioner of this country.

MEDICAL EDUCATION.

Medical Study; an Introductory Address delivered at the Bristol Medical School, at the Opening of the Winter Session of 1836. By *J. A. Symonds*, M.D. Physician to the Bristol General Hospital, and Lecturer on the Theory and Practice of Medicine. Octavo, stitched, pp. 34. Bristol.

This Address is not unworthy of the fair professional fame of Dr. Symonds,

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nor of the medical school of Bristol. Delivered before the students of that school, it contains advice adapted to those both of province and metropolis, and to the students, also, of an older growth, who constitute the profession itself. At the present time, when young men engaged in learning medicine are seduced to political meetings, and withdrawn from the pursuit of what alone can ensure their success in after-life, to mix in discussions, and to nurture a spirit which brings shame on them now, and will entail future ruin—at such a time, it is pleasant to see a man like Dr. Symonds pointing out, with the force of reason and of eloquence, the true road to honour, fortune, and distinction. That road is broad, yet many miss it; and those who, disliking the "tolls" that are found on it—tolls which are indispensable for keeping it in order, ride "across country" on their sorry hacks, find to their cost that the near cut has carried them a great way round.

It must be obvious to all who watch the expression of public professional opinion, that a moderate party is daily acquiring more consistency and strength, and that its ranks contain the greater portion of the talent and the principle existing amongst us. That party is not limited to province or metropolis, to the graduates of this college or of that, nay, not to any grade in the profession. As the old aristocratical feelings and pretensions are gradually disappearing with the march of improvement, their possessors are fused with the mass of liberal, but moderate men, whose education enables them to see, and whose solid interests compel them to feel, that their places in society as gentlemen, and their rank in science, must be equally endangered by violent and disintegrating measures. It would be well, indeed, if our political arrangements could be once securely established in a mode satisfactory to all—it would be well if all could combine in advancing the interests of medicine by the peaceful and philosophic means which are congenial to it—but, alas, this seems an idle wish, an Utopian expectation—and the utmost that can be hoped for is, the consolidation of a party of moderate men—a party drawn from every rank—a party which shall oppose its calm sense and moral influence to the zeal of intemperate and the artifices of designing men. Dr. Symonds may fairly be said to represent the class of thinkers we allude to; and some of the passages we shall now extract embody the sentiments it entertains.

1. *Necessity of General Knowledge, and of a Scientific Character.*

Dr. Symonds observes, and with great truth, that the public expect from the medical man who aspires to distinction a considerable degree of learning, independent of what is strictly professional. It is because the physicians have possessed that in a higher degree than the surgeons, that they enjoy the superior relative rank—a noble ground for distinction. We have heard it said, that at the conversazioni of a celebrated whig nobleman, distinguished in politics and literature, a patron of science and the polite host of philosophers and litérateurs, physicians have always been cordially welcomed. The noble statesman has frequently observed that *their* society had ever proved amongst the most agreeable and most instructive, the least cramped by professional narrowness of mind, and the most tinctured by a liberal philosophy.

When we look back upon past ages, we have reason to be proud of the scholastic and literary merits of those who have left us immortal professional

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legacies. Hippocrates, Galen, Celsus, Aretæus, Linacre, Bacon, Sir Thomas Browne, Locke, Mead, Friend, Darwin, and Young, have reflected the scientific character of their age, or have even been in advance of it. That will be a dark day for the profession, when its general attainments are sunk in the mercenary struggle of interests and of necessities.

But it may be questioned whether it is possible for the mass of the profession to acquire the general knowledge that we speak of. It must be recollected that such knowledge is only obtained by a large sacrifice of time, and by a proportionate outlay of money—by an expenditure, in fact, of capital, which the majority have not, and which, *if* expended, would not bring, in the crowded ranks of general practice, an equivalent return. Medical assistance must be found for all classes. But, as all classes neither will nor can remunerate alike, those who attend the poorer cannot be expected, for the shabby income they receive, to disburse a great capital in the shape of general and preliminary education. This is the great regulator of professional ranks, this it is which we fear will disappoint, for the present, the amiable, and the desirable plan, of giving all practitioners high degrees, which can only be the reward of a monstrous outlay in previous medical and general study.

It has frequently been urged, and with all the intemperance of interest, if not of ignorance, that medical education is not cheap enough, and that greater facilities should be afforded to poor and industrious talent. A specious appeal to the best feelings of the heart, an appeal which is too apt to stifle the severe maxims of reason and of judgment.

But the man of the world is constrained to take society as it is actually constituted, and to acknowledge that many plausible plans of reformation are adapted for Utopia—but not for *it*. If all classes of men could be simultaneously improved, if abstract principles of justice and of virtue could be made to animate every breast, and to regulate every public and private action, if, in short, Great Britain could be transformed into Laputa, and her commercial sons into the sunbeam-sucking sages of that happy island, then many of our reformers might safely be permitted to legislate at large, and many of their propositions might reasonably be adopted. But that desirable event has not yet arrived, and, in 1837, the plan of cheapening medical education is exposed to one or two slight objections.

1. Different classes in this country are popularly considered to possess different degrees of what is called respectability. It so happens that the wealthier classes are usually deemed the most "respectable." Whilst these principles obtain (we do not defend them) a profession which offers no temptation for respectable people to join it, which can give them no prizes if they do join it, is scouted by them, and soon ceases to be thought respectable itself. Unfortunately, this is to a certain degree, the case with medicine at present. The bar, the church are both deemed more honourable in a worldly point of view than *it* is—not simply because the prizes they offer are higher, but because the capital necessary to enter either with a prospect of success is on the whole too great to permit the inferior classes to rush into them en masse. If we lower medicine, while the other learned professions are not lowered also in a proportionate degree, we necessarily increase the disparity between them, and degrade in the world's eye the former. Observe that we are simply stating the fact. We neither

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support nor condemn the public's mode of thinking. But the public do think so, and we leave it to the profession to decide whether it wishes to debase itself.

2. If medical men are agreed in any thing, it is in the conviction that they are too numerous already. This sentiment is in every-body's mouth. Ask any physician, surgeon, or general practitioner what he thinks the great practical evil, and ten to one he replies;—"The profession is overstocked." In all the large towns, nay in the very villages and hamlets, medical men, like the Kilkenny cats, are eating one another. If a doctor dies, two or three set up before the hearse has left the old man's door. We may exclaim with Hamlet—

> The funeral-baked meats
> Do coldly furnish forth the marriage table.

What a pregnant commentary on our crowded and uneasy state, has been lately read by the proceedings of the Commissioners of Poor Laws. They offered hard, almost insupportable terms to the old and established practitioners. Stung at the insult, smarting with the injury, the latter were compelled to close with the Israelitish bargain, because they knew, and, where they kicked at it, they felt, that nothing was so easy as for those Commissioners to procure, at a minute's notice, any requisite number of hungry, and not ignorant, scramblers for the bone they offered.

Is not this an evil? Poll the profession from the Lizard's Point to John o'Groats, and their wry faces will cry yes. And what is the remedy that our modern medical economists propose? Listen practitioners we pray you—listen to the marvellous panacea for your ills. They propose that every facility should be offered to the entrance of fresh members—that *poor talent* should be encouraged—that all "tolls" should be abolished, or, if not abolished, reduced to the very minimum. Admirable method of bettering our state! We are too rich—the whole profession is a monopoly—we require dilution—Homœopathic dilution.

Seriously, is it not quite evident that by rendering access to the profession very cheap, we offer a premium on the entrance to it? If we diminish the capital * necessary for a medical man much below that necessary for a lawyer or a clergyman, is it not clear that we shall have proportionally more medical men than clergymen or lawyers? The result is a ruinous competition—a competition already, with existing checks, too great—with diminished checks inevitably greater.

The cool calculator of the misery of the profession may apply to its case, the political principle of supply and demand. But that application will not bear the test of rigid and impartial scrutiny.

It is true that in commerce, capital will be embarked in proportion to the returns anticipated and obtained, and, if these returns prove inadequate, the capital, be it labour or money, or both, will sooner or later be withdrawn.

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* We do not use the term capital in a monetary sense only—but as the representative of the time and money so expended in education.

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But the great distinction between ordinary and professional capital is this—that the former is generally marketable and convertible, and the latter is not. If a merchant invests to-day 10,000 pounds in tobacco, and the profit is insufficient, or if a part of his capital is gone, he may put what remains in the funds, or he may embark it in the purchase of cotton, or in a thousand other manners. But if a man has been educated for our profession, and after some years' trial, fails of success, his professional knowledge is of no use to him in any thing else that he engages in, and that capital is entirely lost.

There is another evil, not at first so obvious, which must spring from the extreme cheapness of medical education. If we invite into our ranks large numbers of persons born and brought up in comparative indigence, their scale of artificial wants is so low, that they will be content to live on very little, or, rather, a very mean income indeed will not diminish but perhaps increase the comforts to which they have been previously accustomed. The necessary result is a grinding competition, the consequent diminution of the profits of all, and the degradation of the whole profession. Are medical practitioners so overpaid now, that they are anxious to encourage rivalry, increase their numbers, and generously lower their charges and returns? If they are, we must applaud the philanthropic spirit, and we recommend them to urge with augmented vehemence the abolition of all checks upon accessions to their ranks. True, they will grow poorer yearly—true, they will be snubbed by every commissioner, and every discontented patient—true, they will sink lower in the estimation of the world. But what of that? They will enjoy the proud satisfaction of knowing that if the fire burns less brightly in the hearth, philanthropy blazes in their bosoms—that if the purse becomes lighter, money is after all but trash—that if bullied by every jack-in-office, they have within them a noble independence, and a proper self-esteem—

> Which nought external can expose,
> To gross material bangs and blows.
> Then how is't possible a kick
> Can e'er reach that way to the quick?

that if the world thinks meanly of them, it erects a false and grovelling standard of respectability—in short, they will be told by liberals of the first water how patriotic and disinterested they are, and they will find what a charming thing it is to be so.

3. When we are presented with the picture of needy talent, knocking at the door of science, and spurned by the surly porter of wealthy monopoly, our indignation is naturally roused, and the generous impulse of our common nature is to throw those portals open to all. But reflection soon suggests a comparison between the evil and the consequences of the remedy, and forces on the attention that iron rule, which seems to regulate alike the maxims of Providence and man, *that* partial evil must be tolerated for the sake of the general good. The enthusiast looks only at one needy man of talent apparently unable to obtain what he merits. The philosopher regards the condition of a profession, the social welfare of many thousands. It would be well, if the utmost encouragement of talent were compatible with the general advantage of the mass—it would be well, too, if no such thing

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as moral or physical evil existed—if there were not pain, disease, decay—if there was no inequality amongst men—if the world was a Platonic commonwealth. But it is not yet so, and we must patiently await the moment when the efforts of the burning philanthropists about us will effect the happy consummation. Needy talent is at present in the situation of the knife-grinder, and requires to be stimulated by the "friends of humanity" to a sense of its unutterable wrongs.

> Needy knife-grinder! whither are you going?
> Rough is the road, your wheel is out of order—
> Bleak blows the blast; your hat has got a hole in't,
> So have your breeches!

No doubt there are some instances of talent oppressed by menial occupations, and unable to rise through the muddy waters that encompass it. Yet it may be doubted if in a country like this, *great* talent is frequently kept down. Difficulties are perhaps less unfavourable to its exercise and development than we might be led à priori to suppose; and it is certain that such difficulties have formed in many well-known instances, a stimulus to genius.

But, after all, the question reduces itself to this. Is it better to inflict certain injury on a profession, with the chance of picking up a Hunter or two additional—or, legislating for the mass, and in accordance with the general tone of society, to maintain the respectability and solid interests of that profession, by requiring from its introants what the very needy classes are unable to afford? This is the common sense view of the dilemma. It is for the profession itself to decide on it.

We will suppose that the profession is not willing to perpetrate felo de se, and that it *has* decided on protecting its dearest interests, and maintaining its respectability. We will suppose that it has refused to let in principles and measures which would inevitably swamp it, and send it water-logged down the stream of public opinion. We will suppose, in short, that the profession does not approve of the adoption of that "cheap and nasty" system, which would invite into its ranks all who could not hope to put foot within the pale of divinity and law, and would convert itself into a huge refuge for the destitute.

The question then arises—how give effect to this salutary determination? Two modes present themselves—either arbitrary tolls may be levied on the student, and monopolies erected for the taxation of him and the enrichment of themselves; or, an extended system of education may be enforced, and severe examinations may be instituted as a guarantee for its adoption.

The first proposal requires no consideration. Such tolls and such monopolies are contrary alike to the spirit of the times, and to the best interests of society, and neither would their erection nor continuance be tolerated. Legislation, whether supreme or municipal, must march with opinion, or will be trampled under foot. The only principle which it can recognize, or on which it can act, is the utilitarian one—"the greatest good to the greatest number." The sun of monopolies has set for ever.

But the plan of excluding crowds of paupers from our ranks, by requiring such a full measure of professional education as paupers cannot purchase, wears a very different aspect, and would be followed by very different

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results. It cuts two ways, and either way for good. It is a check upon the numbers who enter the profession, and it enhances the attainments, and consequently the respectability, of those whom it admits. The College of Surgeons and the Company of Apothecaries, have widely extended their curricula, and greatly elevated the standard of professional acquirements in the candidates for their diplomas. The competition of the various schools, their number, and their interests, preclude the idea of exorbitant fees, and, indeed, but for the lengthened period of medical education, that competition would be productive of the ruinous consequences we have dwelt on, the introduction of excessive numbers into our ranks.

There may, for aught we know, be some who will clamour at the principle of insisting on lengthened study and severe examinations. They will exclaim that this is monopoly too. Monopoly to a certain extent there is and must be. Those who cannot afford to comply with the curriculum are excluded. That is true enough, but frame what curriculum we may, adopt what restrictions we please, there still must be a barrier somewhere. Our most radical reformers never dreamt of abolishing a curriculum altogether. The question is only one of plus or minus, and its determination must rest, as we have already stated, on the principle of general utility.

We must now return to Dr. Symonds, from whom we have for some time parted company. He proceeds to inform his audience how knowledge is to be acquired, and he naturally enumerates three methods—reading, attending lectures, and personal observation.

2. *Mode of Professional Study.*

1. It is difficult to say to what extent reading should be carried, because it is difficult to lay down a rule which shall fit minds of various calibre. Dr. Symonds' observations on this head appear to us to be very just.

"Now I believe that on this, as upon so many other similar subjects, no rule can be devised, applicable to every description of intellect. There are some, for instance, who will derive from reading, and retain, what would have escaped them entirely had they been dependent solely on their powers of observation; while others have so little capacity for book study, and get so little by it, that time is lost upon it which might have been devoted to experience. But such extremes we must leave to shift for themselves, according to their respective peculiarities; I address myself to those who are able and willing to make use of either mean, according as it may promise more advantage. Reading, then, is never to take the place of experience; its object is to present you with that which, either you could not have learnt at all, or which, at all events, you could not have learned so soon, and with so little cost, without it. It is intended to give you the result of the observation of others, without the fatigue which they incurred in obtaining and in digesting it, and in making the proper inferences from it. Reading saves you a prodigious expenditure of time, even supposing you could have ascertained and discovered as much as the authors, under similar circumstances. It prevents you from repeating toilsome investigations, terminating in the same results, as what you now obtain more easily and expeditiously; and it gives you starting-places from which you may, if so inclined, push onwards in new careers of invention. It is true, that many powerful minds have allowed themselves to become entangled in the mazes of the mere literature of science, when they ought to have been labouring in fields of observation. You will do wisely to take warning from such examples; but, on the other hand, beware of falling into a habit of despising recorded facts and opinions; and of

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imagining, that all which is necessary to be learnt you can teach yourselves; and of listening to that cant which tells you to rely, solely, upon your own experience, and to allow of no guide but nature." 21.

The medical student, and the medical man must be ever a student, should exercise discrimination in the works he peruses. Dr. Symonds advises, and we perfectly concur with him, that those should be read first, which present a good summary of what is known on each particular subject—that then the history of discoveries and opinions in relation to it may be studied—and, finally, that the peculiar views of individuals may be carefully examined. Such a course of reading is the most complete that diligence could desire, or time and opportunity afford; but its very completeness precludes the idea of its being generally followed out. If the ordinary student makes himself conversant with the best summaries of what is known, he does as much as can reasonably be expected, and more, we are afraid, than is usually done.

Dr. Symonds reprobates the extreme of admiration or contempt for antiquity, an exaggerated love of novelty, or dread of innovation. He paraphrases the opinions of Lord Bacon—opinions still just, still applicable, still worthy of attention. In that monument of learning, dedicated to the advancement of it, Lord Bacon points out with a master's hand these conspicuous mental infirmities.

"The first of these peccant humours," says he, "is the extreme affecting of two extremities: the one antiquity, the other novelty; wherein it seemeth the children of time do take after the nature and malice of the father. For as he devoureth his children, so one of them seeketh to devour and suppress the other, while antiquity envieth there should be new additions, and novelty cannot be content to add, but it must deface; surely the advice of the prophet is the true direction in this matter, 'State super vias antiquas, et videte quænam sit via recta, et bona, et ambulate in ea.'"

"Another error, induced by the former, is a distrust that any thing should be now to be found out, which the world should have missed and passed over so long time; as if the same objection were to be made to time that Lucian maketh to Jupiter, and other the heathen gods, of which he wondereth that they begot so many children in old time, and begot none in his time; and asketh whether they were become septuagenary, or whether the law Papia, made against old men's marriages, had restrained them. So it seemeth men doubt, lest time is become past children and generation; wherein, contrariwise, we see commonly the levity and unconstancy of men's judgments, which, till a matter be done, wonder that it can be done; and, as soon as it is done, wonder again that it was no sooner done; as we see in the expedition of Alexander into Asia, which at first was prejudged as a vast and impossible enterprise: and yet afterwards it pleaseth Livy to make no more of it than this; 'Nil aliud, quam bene ausus est vana contemnere:' and the same happened to Columbus in the western navigation. But in intellectual matters, it is much more common; as may be seen in most of the propositions of Euclid, which, till they be demonstrated, they seem strange to our assent: but, being demonstrated, our mind accepteth of them by a kind of relation, as the lawyers speak, as if we had known them before." 41.

It must be admitted that the fault of our day is *not* a reverence for antiquity. So many great improvements have occurred, so much has been effected in the science and in the practice of medicine, that the stability of the professional mind has been disturbed, and, in its vertigo, every new object presented to its vision wears a distorted and exaggerated shape. We can scarcely

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open a journal, without finding some preposterous proposal, confidently recommended or magisterially enforced, and sure to hook a goodly number of simple-witted readers.

2. Lectures were formerly thought to be another method of conferring and of receiving instruction. Dr. Symonds is so far behind the level of the day, that he still continues to entertain a sentiment which men of liberality and spirit have discarded. His obsolete ideas are thus expressed.

"To some or all of you, it may possibly appear that, excepting those which are accompanied by demonstrations and experiments, lectures present no greater advantage than can be derived from books. But, before noticing this objection, I may remark, that they are necessary in the present state of things; that is, an attendance upon them is imposed by those who have the duty of ascertaining the qualifications of aspirants to practice. The reason for their imposition is, probably, not only a conviction of their use in medical education, but the want, at present, of any better proof that a certain quantity of time and attention have been devoted to study. But independently of their being required, they present many obvious advantages. The subjects may be treated more amply, more minutely, and more familiarly, than in books; and they may be illustrated by valuable experience, which would never have been communicated in any other form. Many persons also receive ideas, orally delivered, with less fatigue than by reading; and all must occasionally find it an agreeable change of occupation, to study by the ear instead of the eye. '*Levat lassitudinem etiam laboris mutatio.*' But we must not forget that the combination of the two modes of study affords advantages which cannot be derived from either, singly; one suggests further investigations; the other explains and throws new light upon the ideas first received." 23.

This may appear plausible, and on a superficial inquiry it may seem likely that physicians and surgeons who have devoted time and trouble to acquiring and to methodizing information, will possibly be enabled to convey some instruction to those young men who listen to their lectures. But such foggy notions are quickly chased away, when the new lights dawn on the medical horizon. We then discover that lectures are a juggle—prescribed courses of study a cheat—that young and inexperienced men are far the best judges of what they should or should not learn—far the best suited for guiding themselves—that parents, and masters, preceptors, and heads of colleges are all wrong, intolerant bigots, and rapacious oppressors, when they suppose or enjoin the necessity of any checks on the imprudence, improvidence, or want of mature wisdom of youth—in short, that young men should have their tether, and pick up information how they like and where they can.

It would be easy to enumerate the many salutary consequences which would spring from such a system. All the great schools would of course be broken up—lectures being unnecessary, and precariously attended, if at all, the many able men in London, Dublin, Edinburgh, and the great provincial towns, who now devote their time and talents to this method of instruction, would turn to other occupations—chemistry, anatomy, materia medica, and other sections of medical science, now absurdly looked on as demonstrative, would be studied much better without laboratories, musea, dissecting-rooms, injections, collections of drugs, or herbaria—each young man would exhibit the delightful spectacle of self-taught genius, and in short, we should return to those good old times when there were no esta-

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blishments for medical education, when appreticeships flourished in septennial vigour, and when medical science was *so* much higher, than it is at present under the ridiculous and debasing system that prevails.

It has long been the opinion of those who are somewhat interested in the matter, nay of those who have surreptitiously passed for philosophers, that the passions of youth are too impetuous to allow it to dispense altogether with restraint. Experience has appeared to justify the sentiment, and in our own profession many have thought they discovered evidence of its correctness. Young men, who have left the houses of their fathers or their masters, for the purposes of study at universities or in towns, have often seemed to betray an ignorance of their real interests, and seduced by the contagion of example, or by the blandishments of passion, they have neglected the opportunities of acquiring knowledge,—absented themselves from lectures, dissecting-rooms, and hospitals—squandered their allowance at the theatre, the tavern, the billiard-room, and brothel—and returned to their relatives with minds and bodies debauched by dissipation, corrupted by vice, but not instructed in that professional knowledge they were dispatched in quest of. There are few of us who may not imagine that such cases are too common, who may not think that the constituted professional authorities are consulting the fondest wishes of parents, and the real interests of students, by exercising a judicious degree of vigilance, and by ensuring, so far as their regulations can, that attendance on prescribed lectures, which is professed, and which was thought necessary, or they would not have been prescribed at all.

But again we are set right by those who are imbued with the spirit of the age. Youth needs no kind of restraint—as it was capable of acquiring knowledge without the aid of lecturers or of schools, so it is fully equal to its own moral guidance—stringent examinations are tyranny—certificates of prescribed attendance are humbug—and any regulations to secure such attendance are a gross interference with the liberty of the pupil.

We begin ourselves to be infected with a noble enthusiasm for universal freedom of all sorts—we begin to see the villainous principles which have ever actuated fathers, and masters, and colleges, and governments—we begin to blush at the despotism exercised on youth, on that age which dotards conceive to want experience. But why stop at students? There is a much afflicted class, who may claim our sympathies for the wrongs that they endure—we mean the school-boys. Our blood boils when we think of the restraints put on *them*—of their being compelled to learn—of their little tender bottoms lacerated by "bummers." We can look on this harrowing picture no more. Down with all compulsory education—up with the voluntary system. Our creed is that of poor Grimaldi. When the mobs went about London, smashing the windows of all who did not chalk on their doors "No Popery," that most intellectual of clowns put up a board, on which was written "No Nothing." The good effects of the Saturnalia that are coming, are perhaps apparent in some degree already. After a broken head or two from the new police, a display at the Sessions, an indictment under Lord Ellenborough's Act at the Old Bailey, a personal inspection of the colony in New South Wales, all for the sake of maintaining the respectability of our learned profession, and, like Admiral Byng's

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execution, " pour encourager les autres," the modern neophyte will return to his admiring family a *finished* student.

3. Dr. Symonds concludes, and we quite coincide with him, that the *observation* of the student himself is more important than either lectures or reading. The object of each of the latter is to direct and to assist the former—to tell the young man what he is to look for, and how he may best find it. Lord Bacon, we believe, in his Essays remarks, that conversation makes a ready man, reading a learned man, and practice an expert man. In our own profession, observation alone makes a practical man. The spirit of observation and the habit of it should be warmly inculcated on the student, a spirit and a habit which will stick to him through life, and prove of incalculable service both to his mind and to his interests. Some of the men who have adorned medicine most, have displayed this taste for observation in a striking manner. It was either Petit or Paré of whom the following anecdote is told. An operation of some consequence was to be performed early in the ensuing morning at the Hôtel Dieu. When the attendants proceeded to open the operating theatre, they found young Paré on the staircase, where he had passed the night, in order to obtain a good view of the operation when the doors were unbarred. An omen of the future practical distinction of the man. For our own parts we would rather trust our lives to a man who had read little, heard little, but had observed long and carefully in a large hospital, than to the most accomplished scholar of the profession, who had had no opportunities of actual observation. Fortunately for the youth of our times, both the metropolis and the provincial towns present the combination of all modes of instruction—good libraries, good lectures, and well-appointed hospitals. When his elementary knowledge is obtained, the student should repair to the wards of the hospital, and watch and note the cases it contains. There is a rich array of facts, there he acquires that relish for them, so characteristic of a manly mental appetite, there he forms the habit of thinking and of acting, which in after-life will give him confidence when less observant men will be confounded, and will confer on him those qualities so requisite for professional success—decision, accuracy, and the command of resources.

3. *The Spirit of Professional Study.*

What signifies the mode if the spirit of study is not good? That gives a tone to all that is done, and, like *conduct* in life, may make or mar success, in spite of talent, or without it.

Dr. Symonds inculcates the necessity of a passion for medicine, at all events of a taste for it—of the inclination and the habit of making its objects our first object—of patience in the pursuits of its truths and of their reward. We may say to the hesitating and discouraged student what was said to that young lawyer who afterwards held with such high reputation the great seal of England, " Go on, John, turn neither to the right nor left, and you'll be Lord Chancellor at last." To proceed with Dr. Symonds' injunctions, he does not forget to enumerate diffidence in forming an opinion, a diffidence so characteristic of knowledge, so frequently contemned by ignorance—nor does he omit insisting on what is sometimes disregarded, the entertainment of a deep respect for the profession of which we are members. This is a very excellent precept. How can we expect men to attach credit

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to either our science or ourselves, when we affect a scepticism of its powers? Who would listen to the exhortations of that Christian minister, who openly avowed himself a Deist, and derided the crucifix that he called on men to reverence? Who could feel confidence in the treatment of the physician, who doubted the utility of those measures he employed—measures which, in accordance with his own principles, should be inert, or, if active, must be hazardous. It may be confidently said, that the physician who expresses doubts of the powers of medicine displays the extreme either of ignorance or folly—of ignorance if he is sincere—of folly if he is not. The application and the efficiency of medicine in a special malady may admit of doubt; its utility, as a broad proposition, can, to rational and practical men, admit of none.

And what are the prizes which will tempt the sickly student to inhale the foul atmosphere of the ward and of the dead-house, to attend unremittingly the lecture and dissecting room, and to deprive himself of that sweet sleep which rests on the mechanic's pillow, in order that he may pore on the scientific page? Worldly distinction is not one of those prizes. The fame which the Gazette confers is not for him—he has not, like the advocate, the prospect of the ermine, the seals, or the coronet—medicine has not, with the Church, her lawn sleeves—nor can she, with successful trade, pour thousands in the lap. What then *does* she offer? It must be owned that to estimate her favours highly, it is necessary to weigh them in a philosophic balance. Industry may reasonably look forward to a competence, and may anticipate crowning its "life of labour by an age of ease." But prudence will not count on more, and science will whisper, "look to me for your reward." That reward consists in the love of philosophic truth, and in the consciousness of ever pursuing and at times attaining it—in the conviction that our profession is stamped by reason, by custom, and by God, as a benevolent and noble one in principle and practice—in the reflection that its exercise improves our mental and develops our moral faculties, brings us into relation with all classes, and that sort of relation which links us with their fate, and endears us to their sympathies,—and, finally, in the experience which it enables us to acquire of the sober pleasures of domestic life. Ambition spurns the tame picture we have drawn, and leaves to philosophy a profession which has only the mean and contemptible privilege of rendering a wise and a good man happy.

ESSAI SUR LA PHILOSOPHIE MEDICALE. Par *M. Bouillaud*. Paris, 1836.

ANOTHER work from the pen of M. Bouillaud! This ever active and most enterprising Professor appears to allow no respite to the labours of authorship, and certainly not one moment of truce to the opponents of those doctrines of which he is such an able champion. In the course of the last eighteen months he has published, in addition to the present volume, a large treatise on the diseases of the heart, and another, of smaller dimensions

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indeed, on rheumatism. He is physician to one of the largest hospitals in Paris, La Charité, is Professor of Medicine to the Faculty, and is a frequent contributor to the medical periodicals, especially to the Journal Hebdomadaire, of which he was for many years the sole editor. At an earlier period of his career, he published some interesting researches on typhus fever—the entero-mesenteric fever of his nosology—and he was, we believe, the joint editor of M. Bertin's work on the diseases of the heart. Although still only a middle-aged man, he has thus achieved for himself an eminently meritorious reputation, as one of the most indefatigable, if not one of the most cautious and philosophical, physicians in the metropolis of France. Having attached himself to the school of M. Broussais, he devotes every power of his mind, and every opportunity of public speaking and of public writing to confirm and illustrate the doctrines of the great medical Reformer of the nineteenth century; and certainly, if unwearied zeal, intrepid energy, and a keen lively imagination, in union too with very considerable talents for research and for forcible description, could effect his wishes, then indeed M. Broussais might fairly "seize and keep the sceptre of medicine," which our author so loyally awards to him.

As might be supposed, all the writings of M. Bouillaud are tinctured with, we should rather say, steeped in, the very spirit of Broussaism; and it is not therefore at all difficult to acquaint the reader with their general scope and tendency. There are three or four leading doctrines, which lie at the bottom of all his writings, whether these be in the shape of lectures, or of formal treatises. These are—the connexion, or rather the dependence, of typhus with a diseased state of the mucous membrane, and especially of the mucous glands, of the bowels;—the vehemently inflammatory nature of acute rheumatism, and the almost invariable co-existence of pericarditis or endocarditis along with it—the origin of almost all organic diseases in chronic phlegmasia of the parts affected—and the extreme rarity of purely nervous or functional diseases.*

The great therapeutic indication on which M. Bouillaud insists, in the treatment of all pyrexiæ, is active and repeated bleeding. He is not satisfied with minute *doses* of blood: these, he says, are totally inefficacious. His practice is very different; he strives to strangle (juguler) the foe at the outset, and for this purpose he repeats the bleeding "coup sur coup," as long as there is any vigorous vitality in the mischief.

M. Bouillaud unquestionably deserves, to a certain extent, credit for having strongly recommended, and for having partially introduced into French practice, a more vigorous and decided plan of treatment in active inflamma-

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* In noticing the cliniques of M. Bouillaud in our Foreign Periscope, we have repeatedly taken occasion to allude to the almost total absence of any of the "neuroses" in the wards of La Charité. The reports of his lectures there are altogether occupied with cases of fever, pneumonia, pleuritis, and other phlegmasiæ, disease of the heart and large bloodvessels, rheumatism, and a few other cognate maladies. We much fear that students educated in such a school must be ill prepared to encounter many of the perplexing casualties of private practice. The Protean forms of hysteria, dyspepsia, neuralgia, &c. constitute, at least in this country, the staple commodity of practice among the wealthier classes of the community.

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tion, than his countrymen have hitherto been willing to adopt. Their remedial measures have been generally far too feeble and inert in the more severe forms of pneumonia, pleuritis, rheumatism, &c. and we are quite confident that if the results of their hospital experience in such diseases were compared with those in British hospitals, they would be found to be greatly less successful. But while we say this, we are very far from being disciples of M. Bouillaud, or of those physicians who can see nothing else in typhus fever, (in cholera also, we believe,) in rheumatism, in erysipelas, and other exanthemata, than merely a local inflammation, and who most perniciously imagine that the only indication of treatment in those diseases is to draw blood, and to deplete the system in other ways. In our author's own words, "the grand triumph of medical science in the present century has been the localization of many diseases which were formerly considered essential, affecting the whole and every part of the frame; and the mighty champion of this all-important change is the immortal Broussais." This is the ever-recurring theme of our author's discourses; and certainly of none more than of the one now under review. But he is too sharp sighted not to perceive the weak points of this pet doctrine, and not to see the necessity of admitting that the *fluids* as well as the *solids* may primarily become altered in some diseases. He alludes to the phenomena of scurvy; and assuredly he could not specify one in the nosological catalogue more appropriate, or one which more unexceptionably illustrates the truth of a cautious and scientific humoral pathology. The changes in the state of the blood in certain fevers are almost as conspicuous as in scurvy; and we have no doubt but that the successful treatment of these will be found to depend upon a due attention being paid to obviate and rectify those, hitherto ill-understood, morbid humoral changes.

But it is high time now to introduce our readers to an acquaintance with the "Philosophie Medicale."

Before entering upon a short review of its contents, we must enter our protest against the mode of authorship pursued by M. Bouillaud. He writes with fluency, ease and force; his ideas come crowding in upon him, and he seems to be never at a loss for energetic and vivacious language to express them. But then there is no method, no labour of arrangement, no regular plan of reasoning throughout the work. The reader is every now and then taken by surprise, from the suddenness with which some new topic is introduced, and next page perhaps deserted; then again brought forward, to be as quickly dispatched; and thus the general impression left on his mind, when he comes to the end, is, that the book is a patchwork of most inconclusive and unsatisfactory discourses.

We can quite picture to ourselves M. Bouillaud at his desk. Bold, rapid, and very clever, once that the pen is in his hand—on it goes without stop or restraint. Like his ardent colleague, M. Velpeau, he may make a boast of writing a book in the course of a week or two "currente calamo." The boast is so truly *à la Française* that we might admit its plea, as a *petitio favoris*, were we not called upon, in our reviewing capacity, to read, peruse, and try to digest the wearisome pages of so many tedious tomes of such a writer as M. Bouillaud.

We are quite confident that if any one of the works of such an author as M. Bouillaud was shorn of its unnecessary pages, and its useful contents

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only were presented to the public, they would not occupy one quarter of their present bulk. We are no disciples of Dr. Hahnemann in the practice of medicine; but most assuredly we should recommend the precepts about infinitesimal doses to some of the authors of the present day.

These prefatory remarks may possibly be of use to those who peruse for themselves the "Philosophie Medicale" of M. Bouillaud; and they will prepare our own readers for the short review which we now propose to take of its contents. The first division of the work is occupied with a historical sketch of medicine. The author takes a rapid, and, as may be supposed, a very incomplete review of the leading schools or systems of physic, which have prevailed from the time of Hippocrates till towards the close of the 18th century, when those two bright luminaries, Bichat and Pinel, arose and vindicated for their country the pre-eminent claim of being the birth-place of modern medical science.

They may be justly considered as the founders of systematic or philosophical medicine in France, and as the primary movers of all those great changes which have been effected by their countrymen since. It is certainly a curious and interesting fact in the history of our profession, that, before their time, France had not given birth to any school or sect of physicians, who carried much influence or had gained many followers in foreign countries;* and that while Germany, Holland, Britain, and Italy could boast of their Hallers, their Boerhaaves, their Sydenhams, and their Morgagnis, little was heard of that land, which within the last 50 years has occupied by far the most conspicuous station in the career of medical improvement, and can now proudly point to at least a score of glorious names in medicine.

To Bichat and Pinel is unquestionably due the honour of having vindicated the medical eminence of their country; and none assuredly are more willing than ourselves to admit the many and most important benefits which they, and their successors up to the present day, have conferred on medical science.

We cannot, indeed, but regret that the French are still so very ignorant of what has been done, and what is doing in other countries. M. Bouillaud, for example, appears to be entirely ignorant of English medical literature; and in this work, which is somewhat boastfully denominated an Essay on Philosophical Medicine, it will scarcely be believed that not a single reference is made to any British physician, save to our distinguished Sydenham, and who, perhaps, has to thank only his Roman garb for this casual notice. The writings of Hunter, Heberden, and of Cullen are, we should think, quite unknown to him; and perhaps, therefore, we should not be much surprised, that even the ordinary practice of British physicians in acute internal inflammations, we allude to the use of large and repeated bleedings, has never

* We ought, perhaps, to make an exception in favour of Sauvages, who was one of the professors, during the early part of last century, in the medical school of Montpelier, which long held the first rank in France. His methodical nosology has been esteemed a work of very considerable merit, and may be considered as having been the precursor of Cullen's better-known system; but it never commanded, we should think, much influence beyond the sphere of the Professor's own pupils.

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been heard of by the French Professor. He always mentions such practice, as if it was an undisputed *discovery* of his own. But we shall recur to this topic afterwards; and we shall, therefore, now proceed, without further delay, to notice his comments on Bichat and Pinel's physiological and pathological doctrines, and on the influence which these doctrines have had on the present philosophy of medicine.

The basis and essential principle of Bichat's system may be briefly stated to be, the referring of all the actions, movements, and effects of living bodies to the operation of certain Vital powers, which are quite distinct from the laws of inanimate matter. Of these powers he made a twinfold division, denominating them by the names of Contractility, and Sensibility. He was strictly and essentially a vitalist in all his speculations; and in the retrospective view, which he takes of the different systems which had preceded him, he mentions with especial praise those of Van Helmont and of Stahl, who, rejecting the chemical and mechanical hypotheses of their cotemporaries, had the sagacity to refer all the operations of the living economy to the presiding and controlling influence of a vital principle, which they denominated Archæus, or Anima. Barthez and Chaussier, his countrymen, adopted with certain modifications the views of Van Helmont and Stahl, and with considerable ingenuity had explained the functions of the body by attributing them all to the action of a vital force. But Bichat perceived the fallacy of thus attributing all the operations of life to a single, undefined principle or law, (whatever name we choose to give it), whose very existence is purely abstract and ideal. A spirit of metaphysical speculation had thus become blended with physical researches. The assumed presiding principle of living matter had been invested with powers and attributes akin to those of reasoning; and hence a vague and jargonish language had been introduced into most works on medical science. Bichat shewed that the only legitimate aim of the physiologist's enquiries is, to study the properties or functions of living bodies, in health and in disease; and to endeavour to find out their mutual dependencies, the phenomena which they exhibit, the action of external agents upon them, and the uniformity or irregularity of their operations.

We have already stated that, he grouped all the vital actions under the two great powers or principles of contractility and sensibility. By contractility he meant that power, in virtue of which the solid parts of a living body are capable of contracting, or of being excited to certain movements, either from the direct application of stimuli to their fibres, or from the interposed operation of the brain upon them.

He described two forms of contractility—the organic, and the animal. The organic contractility appears to be exercised more or less independently of the action of the brain. All that is necessary for its being called into action, is merely the application of a *stimulus* directly to the part. The phenomena which Bichat referred to the operation of organic contractility are sometimes manifest and appreciable by the senses; at other times they are obscure, latent, and are rather assumed than proved to take place. As examples of the former, we may mention the puckering and shrinking of the skin from cold, the vermicular motion of the intestines, the expulsory action of the urinary bladder, uterus, the contraction of the heart, &c. These and such like phenomena Bichat referred to what he called the "sensible organic contractility" of living bodies. It very nearly corresponds to the "irrita-

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bility" of Haller. It is well known to exist for some time after the death of the individual; the period of its persistence varying much in different parts, and in different tribes of animals.

The other set of actions—those, namely, which cannot be perceived by our senses, but which, we infer, must take place in consequence of the results produced—is exemplified in the movements of the fluids in the capillary vessels, in the various secretory and excretory tubes, in the absorbents, &c. Such actions are referred to the "insensible organic contractility" of these parts. This power or property belongs to all living bodies without exception; to vegetables as well as to animals. By some authors it has been denominated "tonicity"—by others "fibrillar contractility."

Very different from either form of organic contractility is the animal, or, what has been at other times called, the cerebral contractility. All the voluntary movements, and many of those which are partly voluntary and partly involuntary, such as the actions of the abdominal and respiratory muscles in the expulsion of the intestinal, urinary, and uterine contents, &c. are to be arranged here.

The other great power also of living bodies—Sensibility—Bichat divided into two forms, animal, and organic sensibility. The former is accompanied with actual feeling or consciousness; the latter is not, and implies only that living bodies are susceptible of being acted upon by their appropriate stimuli, without the consciousness or the will of the individual. The language adopted by Bichat is certainly very faulty, and apt to mislead the reader. When we speak of sensibility, the mind very naturally associates it with the idea of sensation. Now the organic sensibility of Bichat's system is used to denote the very absence of this power or property. The French physiologists of late have, therefore, very properly substituted the term "impressionability;" appropriating that of "sensibility" to the animal sensibility of Bichat.

To these two general properties or principles now described, Bichat attributed all the operations of living animal bodies; and he ingeniously attempted to explain the proximate causes or intimate nature of diseases by referring them to some particular lesions or irregular actions of these properties. We shall extract one passage from his great work, as a specimen of his method: "Dans les maladies nerveuses, c'est *la sensibilité animale* qui joue un si grand role; les convulsions et les paralysies consistent dans une augmentation, ou une diminution de la *contractilité animale*; toute la classe des fievres, toutes les affections gastriques, &c. sont une trouble manifeste dans la *contractilité organique*. Les tumeurs de nature diverse, les exhalations augmentées, le marasme, &c. supposent toutes un trouble dans la *sensibilité organique* et dans la *contractilité insensible* correspondante."

Presuming that the vital properties or functions reside essentially in the solids, and that all the phenomena of disease are only the outward signs or manifestations of some disturbance of these properties, Bichat was obliged, even in spite of many powerful objections, to acknowledge himself to be strictly and truly a solidist. And yet he saw his error.

"Do not, however, believe (says he, addressing the reader), that the fluids are of no import in disease; very often they contain and convey the morbid germ, the morbific matter. It is by the fluids, destined as they are for the nutrition of the organs, that disease is often conveyed to the solid parts: and, on

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the other hand, it is by the excretory fluids, that disease is often eliminated from the system. Physicians have, it is true, greatly exaggerated the influence of morbific humours in the generation of disease; but we should not, therefore, fall into the opposite error, and dismiss the humoral pathology wholly from our reasonings. It is evident that we should always well discriminate between a disease itself, or, more correctly speaking, the *ensemble* of the symptoms which characterise its presence, and the principle or cause which produces it. Almost all the symptoms of a disease are manifested by the solids; but the cause of it may reside wholly or partially in some of the fluids."

There is great physiological acuteness, and practical wisdom in these remarks. It would be interesting to trace at considerable length the ideas of the immortal author on general pathology; but, at the present time, we cannot spare room for this enquiry. There is, however, one short sentence, which from its important truth deserves especially to be never forgotten:— "Toute theorie exclusive de solidisme, ou d'humorisme est un *contre-sens pathologique*, comme une theorie dans laquelle on mettrait uniquement en jeu les solides ou les fluides en serait un physiologique." Although unwilling to assert that the fluids during life are in themselves possessed of vital properties, Bichat did not hesitate to admit that they might become diseased, and thus might be the cause of disease throughout the system, in consequence of internal molecular changes. Alluding to the changes of the blood in some diseases, he says; "Dernièrement nous avons trouvé, au lieu de sang noir abdominal, une véritable sanie grisatre qui remplissait toutes les divisions de la veine splenique, le tronc de la veine porte, et toutes ses branches hepatiques. Cette sanie n'etait pas un effet cadaverique, et le sang avait circulé, sinon altéré, au moins bien different de son etat naturel, et réellement decomposé."

These extracts will suffice to shew that Bichat was not, as some have alleged, exclusively a solidist in his ætiological speculations, even although he professed himself to be so. He was far too enlightened not to perceive the error of studying one set only of living phenomena, to the exclusion of another equally important one. The great excellence, however, of Bichat consisted less in exploring the intimate nature of any class or classes of disease, than in discovering and most ably elucidating the relations of resemblance and of identity between the diseases of distant parts.

It was he who first pointed out, or at least who first established the similitude in point of structure, functions, and morbid changes of certain tissues, such as the mucous, the serous, the fibrous, and so forth, in whatever part of the body they happen to exist. His own words are so excellent, that we shall give them in the original.

"Puisque chaque tissu organisé a une disposition partout uniforme; puisque, qu'elle que soit sa situation, il a la meme structure, les memes proprietés, il est evident que ses maladies doivent etre partout les memes. Que le tissu sereux appartient au cerveau par l'arachnoide, au poumon par la plevre, au cœur par le pericarde, aux viscères gastriques par le peritoine, partout il s'enflamme de la meme manière, partout les hydropisies arrivent uniformement, et partout il est sujet à une espece d'eruption de petits tubercules blanchatres, comme miliaires. Quelque soit aussi l'organe que revete le tissu muqueux, ses affections portent en general le meme caractère, et n'offrent point d'autres variétés, que celles qui proviennent des variétés de structure."

Here we have the essence, the pith and marrow of Bichat's great discove-

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ries. His doctrines, when first announced, were received with the greatest enthusiasm, and adopted with the most implicit submission. Such is the homage which an original and brilliant genius will ever command. But it was speedily discovered that the system of Bichat, like every other which is founded on a pure and exclusive vitalism, was insufficient to explain many of the operations of the body, at least in disease. A few facts will readily prove this to be the case.

Take for example some of the diseased states of the heart; such as contractions of the valves, ossification of the arteries, &c. It is obvious that to attempt to explain the origin or proximate cause of these changes by referring them to any lesion of contractility or of sensibility, is, if not absolutely absurd, at least without any profitable meaning. Then, too, what are we to make of those decompositions and combinations, those analyses and syntheses, in short, those reactions of every sort, which are going on at all times in the laboratory of a living body? , Can sensibility and contractility explain the chemical phenomena of respiration, or of digestion? The universal action of secretion must be, in some measure, connected with the play of certain affinities, hitherto, we confess, undiscovered, but not the less probable. As yet little progress has been made in what may be aptly called "living chemistry;" but we are quite confident that it is to this science, more than to any other, that we must look for any great discoveries in ætiological medicine.

The system of Bichat was certainly a great improvement upon the vitalist systems, which had preceded it. By breaking down, by decomposing, by analysing the complex principle, known under the varying denominations of Nature, enormon, vis insita, impetum faciens, archæus, anima, force vitale, &c. the great French physiologist, divested his favorite science of much of its metaphysical obscurity; and although, we must confess, he has committed a great error in excluding all reference to mechanical and chemical actions in his analysis of physiological phenomena, let us never forget that it was he, who laid the foundation of general anatomy—the only true basis of a rational classification of vital phenomena.

In his own emphatic language, he has tried to do for physiological science, what Newton had done for physical science; to point out and illustrate that secret of creating power—"la simplicité des causes reunie à la multiplicité des effets." The attempt indeed was a noble one, and its execution truly wonderful, when we think that the mighty architect was not more than 30 years of age at the period of his death.

Among the numerous rivals and successors of Bichat, no one was so well qualified to illustrate and to extend his discoveries, as he, "dans les mains duquel devait bientôt tomber le sceptre de la chirurgie moderne." Dupuytren himself published but very little on anatomical and physiological subjects; but his admirable views and doctrines have been made known by the writings of several of his pupils.

Among these, Marandel's Essai sur les Irritations, published in 1808, Cruveilhier's work on Pathological Anatomy, and Roche and Sanson's excellent treatise on Practical Medicine and Surgery, deserve especial notice.

Having thus briefly alluded to the labours of Bichat, our attention is next directed to his great contemporary, the philosophic Pinel. France is justly

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proud of this eminent physician. He contributed largely to raise the reputation of the School of Paris to its present distinguished rank.

In 1798, the first edition of the Nosographie Philosophique—a book which for nearly twenty years was "le code, l'evangile de l'Europe medicale"—was published. Six editions of this voluminous work were exhausted in that period; and in spite of many defects and not a few errors, M. Bouillaud characterises it as "le plus beau monument qui eut encore été elevé à la medecine," whether we regard it as a philosophical and systematic review of medical science, or as a descriptive treatise of diseases. The varied erudition of the author, his long and extensive practice, his great experience in clinical teaching, and the philosophical bias and discipline of his mind, had quite formed him to be the founder of a system, or school of physic.

In the Nosographie Philosophique, all diseases are arranged under five classes—fevers, inflammations, hæmorrhages, neuroses, and organic lesions. Pinel was well aware how exceedingly difficult it is to reduce any groupe of diseases to strict, or well-defined characters or rules. We find therefore that, in the last edition of the Nosographie, published in 1818, (and therefore subsequent by some years to Broussais' Examen) he alludes to the classification of fevers in the following terms: "La division nosologique des fievres m'a paru de plus en plus remplie de difficultés, à mesure que j'ai cherché à la rendre plus exacte et plus complete. Si on veut etre severe dans ses jugements, la doctrine des fievres, telle que je l'ai exposée jusqu'ici, serait sans doute, dans les circonstances actuelles, susceptible de quelques changements, ou du moins enoncée sur quelques points avec les caracteres du doute, si les faits particuliers, sur lesquels portent les assertions generales, etaient plus precis, et leur methode descriptive plus perfectionnée;" and before treating of the last class, that of organic lesions, he has very justly remarked that "elles offrent tant de disparate qu'on peut à peine esperer de les soumettre à un ordre regulier de distribution." It is especially worthy of notice, in reference to the subject of fevers, that there is strong reason to believe that Pinel did not in truth believe in their *essentiality*, at least to the full extent which a reader might be led to suppose from his work. He was well acquainted with the description which Rœderer and Wagler had given of the morbid appearances in the intestines, found in the bodies of those who had died of a mucous fever at Gottingen in 1761; and M. Rostan, in his late Cours de Medecine Clinique, expressly assures us that Pinel followed rather the advice of some friends, than the convictions of his own judgment, in not classifying the groupe of fevers among the phlegmasiæ. The words of M. Rostan are these:—"Le celebre auteur de la Nosographie Philosophique est le premier qui ait senti le vague qui regnait dans l'histoire des fievres continues. Aussi, dans ses premiers travaux (les premiers conceptions chez les hommes de genie sont presque toujours les meilleures), avait-il revoque en doute l'existence de ces fievres; et, si plus tard vaincu par de timides conseils, craignant les animosités medicales, it crut devoir en tracer le tableau dans ses ouvrages, au moins fit-il de grands efforts pour les *localiser*."

The Nosographie was, as might be expected, exposed to numerous attacks from various quarters. The observations of M. Prost in his "Medecine Eclairée par l'Ouverture des Corps," and the more memorable monograph of MM. Petit and Serres on the "fievre entero-mesenterique," sapped the

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foundations of M. Pinel's doctrines on fevers; and then the beautiful researches of M. Broussais on chronic phlegmasiæ, exposed the feeble and faulty arrangement of his fifth division—that of organic lesions. It was in 1816 that the last-named author first directly assailed the doctrines of Pinel on the nature of fevers. M. Pinel, in the last edition of his work, published two years afterwards, alludes to this attack, in a passage which deserves to be recorded.

"It is well known that, since the last edition of the Nosography was published, attempts have been made to introduce a new system of medical philosophy. I do not feel at all inclined to enter at present into any discussion of its merits. I will only remark that it appears to be a painful restraint for certain *effervescent* authors to keep within moderate bounds; they perceive, and perhaps may discover a few isolated and occasional facts; their fancy becomes quite heated in consequence, and at length they fairly believe that they are able to overturn the whole system of medical knowledge, and to establish certain exclusive doctrines of their own.

Those minds, which are but superficially informed, and not accustomed to the slow and gradual progress of inductive science, are readily seduced by such dogmatists. It is thus that the class of primary or essential fevers has been of late years removed into that of the phlegmasiæ, and that it has been attempted to exclude altogether from medical reasoning, the words, 'adynamic' and 'ataxic.'"

We have already alluded to M. Prost's work, La Medecine eclairée par l'Ouverture des Corps.

It appears to be much less generally known than it deserves to be; for even MM. Petit and Serres, although writing on the same subject only a few years afterwards, do not notice it. M. Prost had unquestionably anticipated M. Broussais in many of the doctrines which have been attributed to him, as their author. In the preface to La Medecine, &c. M. Prost states that he minutely dissected more than 400 cases of disease—each dissection occupying him many hours, and some even an entire day—before he resolved to publish his observations.

His great object was to prove that every form of fever is associated with some internal inflammation, whether of the bloodvessels, or of the thoracic, and, more especially, of the abdominal viscera. Treating of bilious fevers, he distinctly announces his opinions in these words:—"Les symptomes ataxiques sont l'effet de la phlogose intestinale. Les symptomes adynamiques sont relatifs à la termination de l'inflammation de la tunique muqueuse des intestins par gangrene, et à l'eloignement plus ou moins rapide du sang des vaissaux dans lesquels il abondait d'abord;" and in another passage he repeats the same sentiment: "Le cerveau peut sans doute eprouver des disordres provenant des phlogoses, qui ont lieu dans sa substance ou ses membranes; mais ce n'est point à ces affections que sont dues les fievres ataxiques: l'alteration organique, qui leur donne lieu, consiste dans l'inflammation de la membrane interne des intestins, avec ou sans excoriations." He states that he had examined upwards of 200 fatal cases of ataxic fever, and that, in every one, the intestinal mucous membrane was found more or less inflamed.

It is very strange that Pinel should never have noticed these observations of M. Prost, in any of the later editions of his Nosographie; and it is still more strange and worthy of notice, that Broussais himself, in the first

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edition of his Histoire des Phlegmasies Chroniques, should have impugned their accuracy. After having mentioned the opinion of M. Prost, as to the influence of gastro-enteritis on the production of Ataxic fever, he adds, "j'ai trop souvent rencontré cette membrane en bon etat, à la suite des typhus les plus malins; j'en ai vu un trop grande nombre s'ameliorer par l'emploi des stimulants les plus energetiques, pour partager l'opinion de ce medecin sur la cause de la fievre ataxique." It was not, till the third edition of the Histoire was published, that the great reformer announced* his recantation of these opinions, and adopted the very creed which a few years before he had assailed. Such is the fluctuation of medical doctrine!

In 1813, nine years after the publication of M. Prost's observations, appeared the famous treatise on Entero-Mensenteric Fever, by MM. Petit and Serres. These authors mention, how much they were misled, at first, as to the true nature and proper treatment of the fever, by regarding it as of the Adynamic or Ataxic order; and even after they understood its pathology, how apt they were to overlook the abdominal mischief, in consequence of the great obscurity, and sometimes of the total absence of the local symptoms. The morbid appearances, which were discovered by them on dissection in almost every fatal case, were enlargement and ulceration of the glandulæ Peyeri in the lower part of the ileum and head of the colon, and enlargement and often softening of the adjoining mesenteric glands. The mucous membrane of the other parts of the intestines was usually but little, if at all, diseased; and the rest of the abdominal viscera exhibited none of the usual signs of inflammatory action.

In one case only was the entero-mesenteric fever complicated with genuine enteritis. But it appears that their improved pathological knowledge did not lead MM. Petit and Serres, in M. Bouillaud's opinion, to take a correct view of the disease, or to treat it properly. The abdominal lesions, it must be known, were not regarded by them as resulting from active inflammation; —their own expression is, "la lesion de l'intestin et du mesentere n'etait pas inflammatoire, il est vrai"—and therefore so far from recommending an antiphlogistic treatment, they frequently used, with the happiest effects, bark, æther, camphor, wine, &c.

All this is very different from the doctrines and practice of Broussais† and his disciples. M. Bouillaud warmly supports all his views, and seems to regard him as an oracle of truth on all occasions. Among other terms of eulogium bestowed upon the founder of the so-called physiological system, he calls him "the Messiah destined to accomplish the regeneration of medicine!!"

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* This fact is certainly not generally known, in this country at least. To our minds it affords strong presumptive proof, that Broussais himself has pushed his doctrines a great deal too far. None is so apt to become a bigot, as a converted infidel.—*Rev.*

† The vivacity of our author is always ingenious and sometimes very amusing. Alluding to the date of the publication of the Examen in 1816, he states that Broussais had announced and unfolded his peculiar system two years before, upon his return with the army to Paris, and adds, "Sans la grande catastrophe de 1814, qui sait si jamais M. Broussais eut accompli sa glorieuse destinée de reformateur de la medecine?"

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It is almost unnecessary to state his peculiar doctrines.

The non-essentiality of fevers, the localisation of them in the mucous membrane of the digestive tube, and the dependence of almost all organic lesions upon chronic inflammation of the part affected—these are the fundamental and leading precepts of Broussais' system. That M. Broussais is truly and essentially a solidist in most of his physiological and pathological views is not to be denied; but it is unfair to assert that he has rejected altogether the influence of the fluids in accounting for the phenomena of diseases.

In treating, for example, of scurvy, (which Pinel arranges along with syphilis, gangrene, cancer, dropsy, diabetes, worms—such an olla podrida of dissimilarities!) M. Broussais expressly states that the disease commences in a corruption, or poisoned state of the blood itself: "le scorbut est veritablement une maladie humorale; et quoiqu'en puissent dire les vitalistes exclusifs et les Brownians, elle n'est pas le pur et simple effet de la debilité generale. Il est donc des cas, ou les maladies peuvent commencer par les fluides, et c'est alors par les fluides qu'il faut les attaquer."*

The doctrines of Broussais have been unreservedly adopted by a large number of his countrymen. In foreign countries, although they have had, we must confess, the beneficial effect of directing the attention of physicians in fevers to local complications, among which the most frequent and most important is certainly that of gastro-enteric inflammation, they have never met with any very cordial reception. We are not aware of a single well known author in our own country, who can be justly considered a Broussaist. In France, too, some of the ablest physicians have never renounced the doctrine of the essentiality, and idiopathic nature of continued fevers. We shall briefly notice the opinions of a few on either side of the question.

M. Andral had, in the first edition of his Clinique Medicale, treated of fevers in a class by themselves; but in the second and third editions of his work, he has distributed them among the phlegmasiæ, either of the abdominal viscera, or of the nervous centres. "Depuis la publication," says this very cautious and most accurate pathologist, "de l'Examen des doctrines, dont on connoit la haute prudence, de nombreux travaux sont venus appuyer la doctrine de la localisation des fievres."

M. Rostan, after alluding to the attempts of some physicians to banish essential fevers from the nosological catalogue, thus expresses himself: "Il etait reservé à M. Broussais de combattre avec avantage ces croyances de l'ancienne medecine: c'est une justice que nous aimons à lui rendre, et la posterité se plaira sans doute à reconnoitre un service si eminent."

M. Louis also, although he refuses to be ranked as a convert to the doctrines of M. Broussais, nevertheless admits the very great frequency of enteric follicular disease in fatal cases of continued fever, and he expresses his decided opposition to the precepts of his master, M. Chomel, who is the great champion in the present day of the essentiality of all fevers. In addition to these distinguished authors now mentioned, we may add a host

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* With such an admission as this on the pathology of scurvy, is it not wonderful that Broussais and his disciples reject so dogmatically the influence of humoral vitiation in producing cholera and some forms of fever?

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of others, as MM. Lallemand, Roche, Begin, Rayer, Duges, Billard, &c. all of whom are inclined to admit the correctness of Broussais' discoveries. M. Chomel himself in his recent work on Typhoid Fever, admits that "the follicular inflammation of the intestines is so frequent in those who have died from fever, that during the last five years of our practice, we have not met with a single contradictory example." But in spite of this admission, he still maintains, much to the dissatisfaction and displeasure of M. Bouillaud, the doctrine that fever is an idiopathic affection, and that the enteric disease is rather one of the effects, than the real cause, of the febrile action.

Such was the view which Laennec also took of the subject. His words are these: "the tumefaction of the mucous crypts or glands of Peyer, and the inflammation and ulceration of the intestinal mucous membrane are, in the majority of cases, evidently posterior to the development of the febrile symptoms, and consequently are no more the cause of these, than the cutaneous eruption is the cause of small-pox." The doctrine too of M. Broussais, that phthisis pulmonalis, scirrhus, and some other diseases of organic lesion are generally induced by chronic inflammation of the affected part, was vehemently opposed by M. Laennec, and after him by MM. Bayle and Louis. Even M. Bouillaud himself is too shrewd to commit himself to an unqualified admission of his master's doctrines on this point

But this is a subject which we cannot pursue at present, and which indeed has been only incidentally introduced by M. Bouillaud. The paramount object of our author is, to prove the local origin of continued fever, and the superiority of vigorous antiphlogistic remedies over every other mode of treatment in all febrile and inflammatory diseases. For this purpose, he appeals with confidence to the statistical tables of mortality from these diseases published by his opponents, and to the tables drawn up from his own practice at the great hospital La Charité.

We shall briefly notice these in succession.

M. Chomel in his Leçons sur la Fièvre Typhoide, Paris, 1834, estimates the average mortality, from this disease, at somewhat higher than one in every three cases. Out of 138 cases, which occurred in the wards of La Charité from 1822 to 1827, there were 50 deaths; of 18 cases in 1828 there were 5 deaths, and of 51 cases at the Hôtel Dieu, during the session of 1831-2, 16 proved fatal. The sum total therefore exhibits a mortality of 71 in 207 cases.

M. Louis in an Essay published by him in the Archives Generales for 1828, on Typhoid Fever, gave nearly the same estimate of its mortality; and in his recent work, Recherches sur la Fievre, &c. he furnishes a table of 150 cases; of these, 52 were fatal.

The results of M. Bouillaud's practice have been, according to his own report, much more successful. During the last three years he has treated 178* cases of typhoid fever, and of this number 22 only died—thus affording a proportion of only one in every eight. The average number of bleed-

* This is certainly a very large number of fever cases to be admitted into one of the Paris hospitals in the course of three years; but our author, who appears to have been sensible that some of his readers might suspect his accuracy, states that, being physician to the central bureau of admissions at the time, he was able to direct a great number of the fever cases to his own hospital, La Charité.

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ings practised in these cases may be stated at three; and the quantity usually drawn at each time was four palettes or 16 ounces. In almost all the cases, blood was taken also by cupping or leeches, or by both. The other remedies were blisters and the internal use of the chlorurets.

M. Bouillaud is quite in raptures at his extraordinary success, and breaks out into the most exulting language at the thousands and tens of thousands of lives, which might be saved annually, if physicians were universally to adopt his antiphlogistic treatment.

We fear much that his hopes and expectations are far too sanguine. He may captivate and draw along with him a number of young students, who follow his clinique. His manner and the "tout ensemble" of his practice is quite calculated to gain the favour of the inexperienced.

We do not wonder at this; for we well recollect the time, when we ourselves used to be delighted, aye too and convinced, by the lectures of certain teachers, who took the same apparently simple views of many diseases, which M. Bouillaud inculcates; and who could see nothing in fevers but local inflammation of certain organ or organs, and whose practice therefore might be summed up in these words; bleed—bleed—bleed. Not so now with us, after experience has opened our eyes and matured our judgments.

If there is one position in medical practice, of the truth of which we are more thoroughly convinced than of another, it is this; that the character and type of epidemic diseases is not uniform and alike in all seasons; and therefore that a plan of treatment which may be very appropriate and successful during one epidemic, may be most pernicious during another.

No physician paid more attention to this subject—the difference in type of certain diseases in different seasons—that the English Hippocrates, Sydenham;* and all the best writers and most experienced practitioners of

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* The following passage from Sydenham's great work is so full of sound practical wisdom, that we make no scruple to extract it entire. "Hoc saltem pro comperto habeo, ex multiplici accuratissimarum observationum fide, prædictas morborum species, præsertim febres continuas, ita toto, ut aiunt, cœlo differe, ut quâ methodo currente *anno* ægrotos liberaveris, eâdem ipsâ *anno jam vertente* forsitan e medio tolles; quodque, ubi semel in genuinam medendi rationem, quam hæc vel illa febris species vindicat, suspicato inciderim, ad eundem scopum collimans (favente, ut fit, optimo numine) metam quasi semper attingam; donec extinctâ illâ specie, novoque gliscente malo, anceps rursum hæreo, quâ mihi viâ insistendum ut ægris subveniam, ac proinde, nisi ingenti adhibitâ cautela intentisque omnibus animi nervis, vix ac ne vix quidem possum efficere, ne unus aut alter eorum, qui se primi meæ curæ commiserint, vitâ pericletetur, donec investigato jugiter, tandemque perspecto morbi genio ad eundem perdomandum recto pede et intrepidus denuo procedam. Variæ enim sunt annorum constitutiones, quæ neque calori, neque frigori, non sicco, humidove ortum suum debent, sed ab occultâ potius et inexplicabili quâdam alteratione in ipsis terræ visceribus pendent." The Broussaian school, of which M. Bouillaud is so ardent and so enlightened a disciple, is unwilling to admit that diseases are influenced by such causes, as those alluded to in the preceding quotation. According to their creed, fevers are almost uniformly of the same type or character; always depending, as they assert, on the same morbid lesions of structures and requiring nearly the same mode of treatment. This is one of the most prominent errors of the physiological school.

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this country, in London, Edinburgh, and Dublin, admit the accuracy of the statement. In Edinburgh especially, the character of the common epidemic, or typhus fever, has been most strikingly different at one time, from what it had been during a previous year.

In 1817-8 the prevailing fever required copious bleeding, and a strict antiphlogistic regimen; whereas, during the last few years, the leading physicians in the northern metropolis have, in most cases, not only abstained from depletions of blood, but have most successfully employed wine and other stimulants during the early stage. But we must now leave the subject of typhus fever,—the entero-mesenteritis of M. Bouillaud—and glance at some observations which our author has made on the treatment of one or two other diseases: and first of acute rheumatism. No one will deny that almost every case of this malady requires sanguineous depletion to some extent or another; but few will venture so far, as to talk of "strangling" it by large and repeated venæsections, as our author does. M. Bouillaud indeed seems to regard acute rheumatism as solely depending upon a vehemently excited state of the circulation, and to suppose that we have only to withdraw a certain portion of blood, and the morbid excitation will, as a matter of course, be quickly removed. This doctrine is full of error and danger.

There are numerous cases of acute rheumatism, in which, in spite of the most copious and quickly repeated bloodlettings, the symptoms will remain severe for eight, ten, or twelve days, and even then the patient is very far removed from a state of convalescence. Of all the tribe of the phlegmasiæ, there is none in which the blood itself is more seriously altered from a healthy state, than in acute rheumatism. If this be true—and the proofs are so numerous and well known to every experienced physician, that it is unnecessary at present to enlarge upon them—we are bound to consider the disease as affecting, not only the solids, but also the fluids—in short, to regard rheumatism as *partly*, and to a certain degree, a *humoral* disease. The blood itself has undergone certain changes, the most important, perhaps, of which seems to be a great and disproportionate increase in the quantity of the fibrinous matter; and, therefore, it cannot be by merely removing a portion of the circulating blood, that we should expect that a cure is to be effected. The invasion of acute rheumatism is seldom or never very sudden; it is usually preceded for a week or two, or even longer time, by certain premonitory symptoms, which the practised physician recognizes immediately, and by counteracting which in season, he is often enabled to anticipate, as it were, the threatening foe, and arrest him before he has gathered all his strength for the attack. This is the only rational way to "juguler" (we use M. Bouillaud's phrase) the disease. Blood must be taken to prevent the onset, or to check the progress of the synochal fever, which is always very violent in acute rheumatism; some form of mercurial preparation should be given to induce a slight affection of the gums, and hydragogue cathartics are to be administered, to act vigorously on the bowels and kidneys.

In no disease is the urine generally more scanty, deep-coloured, and loaded with urea and uric acid: it is often as dark and as thick as porter; and one of the earliest and most certain signs of the decrease of the disease, is the return of the urine to a healthy state, in quantity as well as in qua-

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lity.* To promote this important object, alkalis, combined with purgatives and with colchicum, are by far the most potent means. Bouillaud takes no notice of this, or indeed of any other indication, except that of subduing the synochal excitement by drawing blood; and as for remedies, we hear of none, save "saignées," "sangsues," and "ventouses scarifiées."

He boastfully tells us that, of 101 cases which he has treated, he has lost only one; and the cause of death in that was from an extensive erysipelas. There is nothing wonderful in all this; for every one knows that a fatal case of acute rheumatism is one of the rarest events in medical practice.†

Differing, as we do, from M. Bouillaud, as respects the etiology, and in part also the treatment, of acute rheumatism, it is but proper that we should state, that the average quantity of blood, which he draws in violent cases of this disease, is not much greater than we should feel inclined ourselves to do. He states it at about five pounds; this is rather too much. If we *must* state a quantity, we should say between three and four pounds.

The urgency, with which our author explains and inculcates his practice, affords to our minds satisfactory evidence, that the prevailing mode in France of treating acute rheumatism is very feeble and dilatory;‡ and we are, therefore, the more willing to judge favourably of his writings, as they may pos-

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* For further information on this interesting and very important subject of practical medicine, the attention of the reader may be directed with advantage to one of the articles in the foreign periscope of this Review for last July, "on the Urine, as affording Indications in the Treatment of certain Diseases."

† It is amusing to observe with what pertinacity of opposition our author pursues M. Chomel, and strives, on all occasions, to expose his errors and inconsistencies. He has accordingly hunted out a case of acute rheumatism, in which death took place, reported in the Bulletin de Therapeutique, for April 1836, from the clinique of M. C. at the Hôtel Dieu. The anonymous contributor of the case had insinuated that its fatal issue had been accelerated by the depletory practice, which had been followed. This might seem to militate against the doctrines of M. Bouillaud; but he very justly remarks in reply, that the frequency and extent of the bleedings in the reported case greatly exceeded what he himself has ever recommended or adopted. Instead of three or four bleedings, each of from 12 to 15 ounces, the poor patient, a lymphatic girl, was actually bled eight different times, and the quantity of blood drawn at each time varied from 18 to 30 ounces!!

This is out-Heroding Herod in grand style! Such is an example, and we might adduce a hundred somewhat similar, of the rash, unscientific, and most irrational practice of some French physicians. There is that strong tendency to *outrance* in every thing they do, that we sober folks on this side of the Channel can never place much confidence in their practical precepts.

‡ We find that our suspicions are quite correct. On examining the article "Rhumatisme," in the Dictionnaire de Médécine, 1827, the treatment there recommended cannot be too much condemned for its inertness. Mentioning venæsection as one of the remedies in acute rheumatism, the writer says:—"Toutefois il est peu de phlegmasies, où les indications de ce moyen sont plus rares qu'ici. L'avantage des evacuations sanguines locales est, au contraire, généralement reconnu dans la maladie qui nous occupe." The rest of the precepts are all of the same stamp. Not even any reference is made to the use of calomel, of colchicum, or of purgatives. The whole article, in short, is one of the very worst, which we ever met with in any scientific dictionary.

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sibly have the effect of introducing a more active and energetic system of therapeutics among his countrymen.

That M. Bouillaud is far too much of a dogmatist, and far too little of a rational empiric, in his doctrines and in his practice, is very apparent from the tone of his remarks on every subject, which he treats. Occasional occurrences speedily assume with him all the importance of constant and characteristic phenomena. We have already seen how stoutly he maintains the universality of intestinal mucous disease in all fevers; and equally bold and stubborn is he in asserting, that cardiac inflammation, in the form of pericarditis or of endocarditis, is an almost uniform complication in acute rheumatism. But we must now quit this subject, and briefly allude, before drawing the article to a close, to the results of French practice in another most frequent form of phlegmasia—pneumonia.

In the article, pneumonia, in the Nouveau Dictionnaire de Medecine, M. Chomel estimates the average mortality of this disease in hospital practice, at one fourth of all the cases. M. Louis has rated it as high as a third of the whole. Of ninety cases treated by M. Gueneau at the Hôtel Dieu in 1829, 38 died. Of 63 treated by M. Bertin at the Hospital Cochin in 1822, 16 proved fatal; and of 24 cases reported from the Clinique of M. Cayol at the Charité, 6 were fatal.

M. Laennec, in treating of the effects of tartar emetic in pneumonia, alludes to his great success with it in these words:—

"In 1824 I treated with the tartar emetic 28 cases of pneumonia, either simple, or complicated with a slight pleuritic effusion. All the patients, with the exception of one, 70 years of age, and who was not able to *tolerate* the remedy, were cured, although in most the disease was very serious. In 1826, I have treated 34 cases. Five of these have proved fatal; but it is to be noticed that in two of the fatal cases, the patients, both advanced in life, were moribund, when brought into the hospital; in the third, the pneumonia was complicated with heart disease; the fourth proved fatal from chronic pleurisy, while the patient was recovering from pneumonia; and in the fifth, there was a co-existent cerebral congestion in an old man of 72."

These results of M. Laennec's practice appear indeed very flattering; but M. Bouillaud confesses himself quite perplexed to explain the disagreement between them and the results of other tables, which have been published by M.M. Lagarde and Leconteulx, both attached formerly to the service of M. Laennec.

The former gentleman has given the reports of sixteen cases which were treated by the above, the antimonial, method under the care of M. Laennec, and of these five proved fatal; and M. Leconteulx has added the reports of other 30 cases treated by M. Laennec during the years 1825 and 1826: twelve of these patients died. Let us now attend to the results of M. Bouillaud's own practice. He has had 152 cases of pleuro-pneumonia under his care, from September 1831, to March 1836: of these, 18 only have been fatal.

The mortality, therefore, has been rather less than an eighth of the whole—a very striking difference from that furnished by the clinique of other hospital physicians.

We cannot afford space for the various tables, which M. Bouillaud has published, and shall therefore only mention a few of the particulars. The

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average number of bleedings was four, the quantity drawn at each being 16 ounces; of cuppings one, the quantity drawn being 12 ounces; of leeches 30 or rather more. It is to be noticed, that all this drawing of blood in various ways, took place within the first three or four days of the treatment; and M. Bouillaud very justly remarks that double the quantity, taken at longer intervals,—a practice too generally followed by his countrymen—would not have the same efficacy. The average duration of the disease, before convalescence had commenced, is stated by our author at ten days.

In perusing attentively the different tables, which M. Bouillaud has published in support of his views, the English critic cannot fail to be struck with the indiscriminate character of many of his statements, and of not a few of his precepts. For example, he finds that, in very many cases, large and repeated bleedings were practised, even when the pneumonic inflammation had reached its third period, or stage—that of infiltration. Such practice, we need scarcely say, is most dangerous and improper. When the disease has been allowed to proceed so far, the prognosis must always be very unfavorable; and most certainly the chances of the patient's recovery will not be enhanced by the "jugulante" treatment, which M. Bouillaud recommends, The moderate use of blood-letting may be, we do not deny, still necessary; but only with the greatest care and caution. The topical abstraction of blood by cupping, the application of blisters, the exhibition of small doses of mercury with squills and such like medicines—these are the remedies which a British physician would have recourse to against pneumonia in the third stage.

But we have had so often an occasion of late years to express, in the pages of this Journal, our disapproval of M. Bouillaud's therapeutic precepts, that it is quite unnecessary to enlarge upon this topic at present. His work on Medical Philosophy has only tended to confirm the opinions which we had previously formed of his character as a physician—ardent, clever, and indefatigable; but rash, rapid, and far too partial. In truth there is very little genuine reasoning or induction in it, and the whole leaves the impression of its being rather an ingenious, though disproportionately lengthened, Essay for a debating society, than a philosophical treatise for study in the closet.

LECTURES ILLUSTRATIVE OF CERTAIN LOCAL NERVOUS AFFECTIONS. By Sir *Benjamin C. Brodie*, Bart. F.R.S. Serjeant Surgeon to the King, and Surgeon to St. George's Hospital. 8vo. pp. 88, London, 1837.

THESE Lectures were originally published in the Medical Gazette. They were published as they were delivered, at intervals, to the clinical class of St. George's Hospital. Their author has now collected them, and offered them to the profession in the shape of a distinct work, which will prove more convenient for perusal and for reference, than in their previous diffused and disjointed form.

The reasons which have induced Sir Benjamin Brodie to adopt this step,

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induce us to imitate it. We think that a complete view and an accurate analysis of these valuable practical lectures will not be unacceptable nor useless to our readers.

It is obvious that there are two distinct methods of studying and describing disease. One consists in reducing symptoms to their essential causes, and in determining the exact nature of the malady. This is the most precise mode. The other looks upon a group of symptoms as a substantive thing, and makes it an object of special study. For this method of investigation to be practised with advantage, the knowledge derived from the former must be presupposed. It seems the easier method; not requiring the assistance of morbid anatomy, it was the ancient one. Being necessarily imperfect, it gave rise to the errors of the old pathology, and when those errors were detected by morbid anatomy, men naturally fell into the opposite extreme, and disregarded it altogether.

If all complaints which physicians and surgeons have to treat, arose from organic lesions, there would be no necessity for studying symptoms, except as the exponents of those lesions. We must become familiar with them as the language of disease, and that would be sufficient. But as many of the disorders which occur in practice, are not the consequences of appreciable organic alterations, their symptoms come to be not merely symbols of disease, but, for all useful purposes, to constitute the disease itself. This is especially the case when the nervous system is concerned, and its functional disturbances are so numerous, and so important, as to merit the closest observation.

The nervous system of the female sex is more delicate than our's, its susceptibility of impressions more vivid, its perceptions less regulated by constant laws, and its associations with the functions of the mind and of the body more intricate, or at least more intimate. Its sympathies with the condition of the uterine system are so marked, that the ancients, as is well known, denominated the latter an "animal in animale." Can we wonder then, that nervous disorders should prevail, or that those disorders should be closely linked with the varying conditions of the generative system, in women?

The customs of civilized society, and the restraints of morality and of religion, conspire to assist the operation of the laws of nature. Woman is peculiarly affected by the restrictions which decorum and the interests of the sex itself, impose on the gratification of the passions. But Nature rebels against the violence done to her, and if the uterus is compelled to remain inactive in those years of life when it is best fitted for the performance of its office, it is often at the expense of serious disturbance to the economy.

It is unnecessary to remark, that the class of complaints we are speaking of have lately attracted a large share of attention, and have been made the subject of investigation by several physicians and surgeons. Some have viewed them as a form and species of hysteria, and, have named them "hysterical," in accordance with that view of their nature and origin. Others have affected to look deeper into the malady, and to refer it to a more exact and a more physiological source, the spinal marrow. "Spinal irritation" is the generic name which these gentlemen have affixed to the multifarious varietes of form in which it shews itself.

Perhaps, as we go on, we shall see reason to believe, that sound objections lie against either name, if that name is really meant to embody the theory

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it seems to do. Perhaps we shall discover that these hysterical affections are occasionally developed, when there is no appreciable derangement of the uterus—and we are pretty confident that observation and reasoning both conspire to display the fallacy of any view, which regards the spinal marrow or the roots of the spinal nerves, as, in all cases, the essential seat of the disorder. It will probably become apparent, that the whole nervous system is at fault, or, that if parts of it are peculiarly affected, it is difficult to discriminate them with sufficient accuracy, to enable us to pronounce that *there* resides the essential mischief.

Let us turn to Sir Benjamin Brodie, and pursue in detail the facts and reasonings that he advances. The work is made up of three lectures. The first treats of the theory of local nervous affections, of the various circumstances under which they exist, and of the principles on which the treatment of them should be conducted—the second exposes the various forms of local hysterical affections—and the third is devoted to the pathology of hysteria, and to the treatment of local hysterical affections.

I. Theory of Local Nervous Affections—various Circumstances under which they exist—Principles on which the Treatment of them should be conducted.

The natural sensations of a part may be increased, diminished, or perverted, although no appreciable lesion exists in it. Or, the sensations remaining unaltered, the motions of a part may be similarly affected, and a muscle or a set of muscles may be in a state of permanent contraction, of paralysis, or of spasm. The two cases are analogous. In the former, the nerves of sensation are involved; in the latter those of motion.

It appears that each nerve has a point in the brain or spinal marrow, with which it is in special relation. The sensory filaments go from a portion of the body to that point—the motory filaments pass from that point to the said portion of the body. Thus a sort of nervous circle is maintained, and into it every part of the body supplied with sensory and motor nerves, and a corresponding point in the spinal marrow or the brain must enter. This fact, for it seems to be one, has been the groundwork of Dr. Marshall Hall's ingenious theory of the reflex function of the spinal marrow and medulla oblongata.

The nervous affections resulting from this law are very frequent, and therefore highly important. In one shape or other, says Sir Benjamin Brodie, you will meet with them at every turn of your future practice, and a knowledge of them is of the greatest importance, both to the physician and surgeon. Without it, you will be continually mistaking the real seat of a disease: your attention will be directed to a wrong object, and, following the symptoms, you will be in danger of overlooking the cause on which they depend. The investigation, however, is not unattended with difficulty, and it will often require all your professional sagacity and skill to trace the phenomena, which occur in these cases, to their true origin.

To understand disorders so numerous, and occasionally so obscure, it is necessary to analyse the phenomena that they display, and to reduce them as far as possible to their essential modes. They appear to be three:—

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1. Irritation at the root of a sensitive or motor nerve, or in its course, is usually manifested at the termination of the nerve most remote from the brain or spinal marrow. This is a law so striking, and, we may add, so familiarly known, that it is unnecessary to insist at any length on it. But a few examples, selected from the many which the experience of our author has brought within his reach, must be interesting, and may be useful. In the following, the irritation operated on the course of the nerve.

Case 1. "A man was admitted into St. George's Hospital in the year 1808, complaining of a severe pain in the inside of his knee. The joint was carefully examined, but no marks of disease could be detected in it. In the thigh, however, there was an aneurysm of the femoral artery, of the size of a small orange. This last disease had scarcely attracted the patient's notice. He said that he should be very well if it were not for the pain in the knee, and it was not until some trouble had been taken to explain to him the nature of his case, that he could be made to understand that the tumour was of any importance. Soon after the man's admission, Sir Everard Home (then Mr. Home) applied a ligature round the femoral artery, in the upper part of the thigh. On the instant of the artery being secured, the tumour ceased to pulsate, and the pain in the knee ceased also. Some untoward circumstances occurred, and the patient died about four or five days after the operation was performed. On inspecting the limb after death, the aneurysm was found reduced to one-half of its former size; some branches of the anterior crural nerve, which passed over it, and which must have been kept on the stretch previous to the operation, were found to terminate in the part to which the pain had been referred, on the inside of the knee; and thus the cause of the pain was sufficiently explained. It was, in fact, a nervous pain, existing where there was no disease, in consequence of pressure on the nerves above." 5.

Case 2. "A gentleman in the year 1816 began to suffer from a gnawing pain in the left leg, referred to the course of the peroneal nerve from the foot to the knee. The pain by degrees became very severe, occupying at the same time a larger portion of the limb. The limb itself presented no appearance of disease. The patient consulted various surgeons, myself among the number. The disease went by the name of neuralgia, but the cause of it could not be discovered, and the remedies recommended were of no avail. After having lost sight of him for a considerable time, I was again sent for to see him in the year 1824. He was now dying with dropsy of the belly, and anasarca of the lower limbs. On examining the abdomen it was observed, as the fluid which it contained receded under the pressure of the hand, that there was a large solid tumour attached to the left side of the lumbar vertebræ, and extending into the pelvis. It was evident that this tumour must have pressed on the origin of the sciatic nerve, and thus it afforded a sufficient explanation of the pain which for so many years had been referred to some of its branches." 5.

In the preceding cases, the cause of irritation, pressure, was applied to the nerve between its origin and final distribution: the effect of irritation, pain, was referred to parts in which that distribution took place.

We find similar affections of the motory filaments of nerves. In a case of comminuted fracture, the spicula of bone pressing on a nerve will occasion spasmodic contractions of the muscles, and it is well known that, in experiments, irritation of a motor nerve gives rise to similar consequences. It would seem, however, that painful affections are more frequent than spasmodic ones, from irritation of nerves in their course: and, that, when pressure operates on a motor nerve, paralysis is more common than convulsion.

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We may turn to some cases which exhibit the operation of irritation at the spinal or cerebral origins of nerves. They are common enough. An apoplectic extravasation in one hemisphere of the brain, for example, will occasion loss of sensation and motion in the opposite side of the body, perhaps convulsions on the same side. From this extreme case we descend to others of slighter, yet of an analogous description—to an instance of pain in some particular part of the body—of numbness in one hand—of affections of the special senses. Caries of the dorsal vertebræ, irritating the spinal marrow, produces pains and muscular spasms in the lower limbs—while the same disease of the superior cervical vertebræ produces corresponding symptoms in the upper limbs.

Case. A gentleman complained of severe pains referred to one side of the abdomen. After having been fixed for some time in one situation, it attacked another. No disease could be detected in the part apparently affected, and the pains were therefore regarded as nervous. It was observed at the same time that his powers of articulation were affected, and that he spoke in an indistinct and drawling manner. This seemed to indicate that there was some disease in the brain, and the suspicion was confirmed soon afterwards by the occurrence of epileptic fits, from which the patient continued to suffer during the few remaining years of his life.

"I mention this case," observes our author, "because I believe that a particular example will serve to impress the fact, which it illustrates, on your minds better than a mere general observation, and not because there is any thing in it in any way remarkable or singular. You will, indeed, when engaged in practice, find nothing more common than this; that a patient consults you, who labours under some disease in the brain, but in whom a particular symptom, referred perhaps to a distant part of the body, is so severe, or so distressing, that he regards this as the original disease; and it is only after a diligent cross-examination that you are enabled to detect the existence of those other symptoms which serve to explain the real nature of the case."

A striking instance of this description occurred to Dr. James Johnson. A woman came under his care on account of severe vomiting. He was unable to discover any local, or indeed any satisfactory cause for it, and the remedies which he suggested were incapable of allaying it. He sent the woman into St. George's Hospital. The physicians who saw her there, experienced the same difficulty in accounting for the symptom, and met with the same ill success in treating it. The woman died. On dissection, there was found disease, we believe an abscess, in the cerebellum, and no other lesion existed.

We had lately an opportunity of witnessing a case, which in some measure resembled the former. A young gentleman was brought to us, on account of obstinate vomiting, and progressive emaciation. The boy looked dull, and had a disproportionately large head, but complained of no pain in it, and had no affection of any of the senses. He had been under the care of several gentlemen, who had not succeeded in arresting the vomiting. We applied leeches and blisters to the head, and the vomiting ceased and has never returned. We purposely refrained from employing any other active remedies, in order to ascertain with more precision the effects of those we have alluded to. Of course, there is nothing in such cases to surprise us,

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when we reflect on the sickness of stomach from concussion, or on the phenomena exhibited in hydrocephalus or apoplexy. But errors in diagnosis are not unfrequently prevented by the recollection of a striking fact which forcibly intrudes itself on the attention, when general principles are difficult of application, or, from some cause or other, are not applied.

"In many of these cases," continues Sir B. Brodie, "the cause of irritation seems to operate always on the same part of the sensorium, and there is little or no variety in the local indications by which it is rendered manifest. At other times it has no determined seat: it may affect at first one portion of the brain, to which a certain function belongs, and then it may affect another portion, whose function is entirely different, and the symptoms vary accordingly."

Case. "A lady became affected with a spasmodic affection of the sterno-cleido mastoideus muscle, producing what is commonly called a spasmodic wry-neck. This symptom continued unabated for a year, and then suddenly left her; but as the spasm in the muscle ceased, she fell into a state of mental depression amounting to insanity; and in this she continued during the whole of the second year. At the end of this period she recovered of the disordered condition of her mind, and the spasm of the muscle returned, continuing from that period up to the time of my being consulted, three or four years afterwards. I was consulted by another lady, in whom a neuralgic affection of the spine alternated with insanity." 8.

2. Although pain is most commonly manifested in the course of the irritated nerve and at a distance from the brain or cord, it appears that at times the irritation is felt at the other extremity of the nerve or at its origin. Perhaps the instance of pain in the back, when port wine is injected into the tunica vaginalis may not be considered unexceptionable. But the case of headache from the presence of irritating matters in the stomach appears a fair example of this fact. The nervus vagus is irritated at its termination by improper matters in that viscus—a headache is the consequence, resembling in its characters the headache of phrenitis itself—and an emetic is instantly followed by *its* disappearance. Who has not seen cases of this description? It is difficult, we think, to explain them, unless we admit that pain may be referred to the origin of a nerve as well as to its distal termination.

3. In other instances a more tortuous route is pursued by sensation, and the effects of irritation are exhibited in a less simple and intelligible manner.

A. Sensation is felt in the ramifications of one nerve, in consequence of irritation exercised upon another, with which it is directly connected at its origin, or in its course.

When a calculus, says Sir Benjamin, passes along the ureter from the kidney into the bladder, it frequently occasions a severe pain in the testicle of the same side. The most probable explanation of this sympathetic affection of the testicle is as follows: many of the nerves of the testicle derive their origin from the renal plexus, which also supplies the kidney, and which is formed by branches of the great sympathetic nerve. The irritating cause, namely the calculus, operates in the first instance on the nerves of the kidney, through which its influence is transmitted to the renal plexus; and from thence it is, as it were, reflected to the nerves of the testicle.

When the testicle is inflamed, it is not uncommon for the patient to complain of pain on the outside of the hip. The following appears to be the

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explanation. The nerves which supply the scrotum and the cord have the same origin (the lumbar plexus) as the cutaneous nerves of the outside of the hip. The irritation of the former is thus communicated to the latter, and referred to the parts to which *they* are distributed.

Sir Benjamin relates an interesting case of this description. A gentleman laboured under a scrofulous disease of the hip, producing caries of the bones and suppuration within the joint. The following symptoms existed in addition to those which the same disease usually produces. The smallest motion of the thigh induced an attack of excruciating pain, amounting to agony, attended with violent spasmodic contraction of the muscles which move the thigh. The limb was jerked in a most remarkable manner for several minutes, and the volition of the patient had no control over these distressing and extraordinary movements. After some time, a tumor began to present itself externally on the anterior part of the limb, raising the femoral artery, which lay pulsating on its surface. Combined with the disease of the hip-joint, there were scrofulous tubercles and abscesses of the lungs, and of this last-mentioned disease he died, the attacks of pain and spasm having subsided for six or eight weeks before this event took place.

B. In other instances, the mode of connexion between the source of pain and the spot to which it is referred, is more obscure. A lesion in one part of the body causes pain in another and remote part; and we are unable to explain the occurrence, by any communication between the nerves which are primarily implicated and those in which the sensation is made manifest. The most probable supposition, in cases of the nature we are about to quote, is this: *that* the impression is conveyed to the sensorium by one nerve, and transmitted by it to another nerve. Yet it is often impossible to determine *why*, in a given case, a particular route is taken by sensation. The following facts are related by our author.

A gentleman awoke in the middle of the night, labouring under a severe pain in one foot; at the same time that some other sensations, to which he was not unaccustomed, indicated the existence of an unusual quantity of acid in the stomach. To relieve the latter, he swallowed a large dose of an alkaline medicine. Immediately on the acid in the stomach having been thus neutralised, the pain in the foot left him.

"The late Dr. Wollaston was accustomed to relate the following history:—He ate some ice-cream after dinner, which his stomach seemed to be incapable of digesting. Some time afterwards, when he had left the dinner-table to go to the drawing-room, he found himself lame from a violent pain in one ankle. Suddenly he became sick; the ice-cream was rejected from the stomach; and this was followed by an instantaneous relief of the pain in the foot.

A gentleman consulted me concerning a pain in one instep. The pain was severe, causing lameness, so that he walked with difficulty; but there was neither swelling, nor, except the pain, any mark of inflammation. I prescribed some remedies, which, however, were of no avail. One morning he called on me, still suffering from the pain in the foot, and so lame that he could not get out of his carriage and walk into the house without the assistance of his servant. Now, however, he complained of another symptom: he had a difficulty of making water, and a purulent discharge from the urethra. He had laboured under a stricture of the urethra for many years, and had occasionally used bougies. Of late the stricture had caused more inconvenience than usual; but he had abstained from mentioning it, thinking that it would be better that he should (if

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possible) be relieved of the pain in the foot before any treatment was adopted on account of the stricture. Under these circumstances I introduced a bougie, which penetrated the stricture and entered the bladder. Immediately on the bougie having been used, the pain in the foot abated; and in less than a quarter of an hour he left the house free from pain, and walking without the slightest difficulty. This happened some years ago, but I have seen the patient at intervals ever since; and, from a most careful observation of his case, he and I are both satisfied that the pain in the foot is connected with the disease in the urethra, and we have never found any thing to relieve it except the introduction of the bougie.

A lady consulted me concerning a pain to which she had been for some time subject, beginning in the left ankle, and extending along the instep towards the little toe, and also into the sole of the foot. The pain was described as being very severe. It was unattended by swelling or redness of the skin, but the foot was tender. She laboured also under internal piles, which protruded when she was at the water-closet, at the same time that she lost from them sometimes a large and sometimes a smaller quantity of blood. On a more particular inquiry, I learned that she was free from pain in the foot in the morning; that the pain attacked her as soon as the first evacuation of the bowels had occasioned a protrusion of the piles! that it was especially induced by an evacuation of hard fæces; and that if she passed a day without any evacuation at all, the pain in the foot never troubled her. Having taken all these facts into consideration, I prescribed for her the daily use of a lavement of cold water; that she should take the Ward's paste *(confectio piperis composita)* three times daily, and some lenitive electuary at bed-time. After having persevered in this plan for the space of six weeks, she called on me again. The piles had now ceased to bleed, and in other respects gave her scarcely any inconvenience. The pain in the foot had entirely left her. She observed that, in proportion as the symptoms produced by the piles had abated, the pain in the foot had abated also." 14.

There are cases (that of traumatic tetanus is one), in which the affection of the nervous system is more extensive and more complete. A wound in an extremity has occasionally given rise to epilepsy, and in many diseases an illustration of the fact is exhibited. The irritation occasioned by dentition will, for instance, prove the cause of convulsions—irritation of the mucous membrane of the alimentary canal in children will do the same thing—uterine disturbance will produce epilepsy. Sir B. Brodie relates the case of an officer, in whose leg a musket-ball lodged. At first it produced no inconvenience, but having shifted its place, it occasioned twitches of the muscles of the limb and general convulsions, as in epilepsy. The ball again changed its situation, and these symptoms disappeared.

From a consideration of the laws which regulate the perception of irritation, we naturally pass to the investigation of the conditions under which its phenomena present themselves.

1. Nervous pains are sometimes described as dull and wearying, at other times, and more frequently, as sharp, darting, or stabbing. They may, in the first instance, be readily distinguished from those occasioned by inflammation: by the absence of throbbing, by their not being increased by pressure: by there being no evident turgescence of the small vessels. But there is more difficulty in the diagnosis afterwards. As the commonest event may prove a source of annoyance to an irritable mind, so will nerves, which have been kept for some time in a state of irritation, transmit every impression that is made on them to the brain, with a disagreeable or painful sensation superadded to it: in other words, the part affected will be tender to the

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touch. And, more than this: the tenderness may be followed by increased vascularity; by a slight degree of swelling; by actual inflammation; not, indeed, continues Sir Benjamin, very active inflammation, but still sufficiently distinctive. In a gentleman who suffered long from what was considered tic douloureux in the face, the parts at last became swollen from an effusion of serum into the cellular tissue, and so exquisitely tender that they would not bear the slightest touch.

2. Nervous pains and muscular spasms both exhibit a marked disposition to be suspended during sleep. They may for a time prevent it, but sleep, having been obtained, is likely to be sound and uninterrupted for many hours. In persons affected with the wry neck, the muscle which is the seat of spasm becomes and remains relaxed during sleep. Exceptions to this law are rare.

3. Nervous pains are usually intermittent. The intermissions are commonly irregular, the patient being subject to paroxysms varying in intensity, in duration, and in frequency, and separated by indefinite intervals. To such paroxysms the term "spasms" is frequently applied; but our author properly objects to its employment, for spasm means contraction, and should be used only to designate involuntary contractions of the muscles.

But occasionally the intermissions are regular, and the returns of the pain periodical, like ague, with which they have been known to alternate. In such cases, the two diseases depend on the same state of system, and are cured by the same remedy, arsenic or quinine. In other cases, however, the character of the pain, whatever that may be, conveys little satisfactory information with respect to either its cause or treatment. The tic douloureux of the face may depend on a projecting spiculum of bone, on carious or dead bone, on disease of the brain, or merely on disorder of the digestive organs. Yet, under these various circumstances, the symptoms may display no material difference.

4. Though any part of the body may be the seat of these affections, some parts appear more prone to them than others.

"They are met with less frequently in the viscera, which are supplied by the great sympathetic nerves, than in other parts. Nervous pains are more severe, and perhaps, on the whole, more common, in those parts which receive their nerves from the fifth pair, as the face, the eye, the tongue, than in any other individual part. Muscular spasms are common in the muscles of the neck, especially in the sterno-cleido-mastoideus. I am inclined to believe, also, that they occur more frequently in the upper limb than in the lower. It is not uncommon to see one hand and arm in a state of constant tremulous motion, there being no other indication of disease. I have seen several cases in which a muscular spasm of the upper limb has shewn itself in the following manner. The patient experiences no inconvenience from it until he uses the limb; for example, until he sits down to write. Then, when he has gone so far as to have written a few letters, some of the muscles act involuntarily, and jerk the hand in a direction contrary to that which was intended; so that, instead of completing the word which was begun, the pen makes a long scratch on the paper." 21.

A lady had her mouth drawn to one side, and was supposed to have paralysis of the opposite side of the face. But, on examination, Sir Benjamin observed nearly constant twitches of the cheek and eyelids on the side to which the mouth was drawn. He satisfied himself that the case was not one of palsy of the muscles of the opposite side, but of spasm of the muscles of *that* side.

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The muscles of the pharynx and œsophagus are extremely liable to be affected. In many of the cases which have been confounded under the general appellation of stricture of the œsophagus, the disease is either a spasmodic or a partial paralytic affection of these parts.

"A lady consulted me concerning symptoms which were ascribed to a stricture of the œsophagus. She was unable to swallow the smallest morsel of solid food, so that she was compelled to subsist entirely on liquids, and even these she swallowed with great difficulty. These symptoms had been coming on for upwards of three years. I introduced a full-sized œsophagus bougie, which entered the stomach without meeting the slightest impediment. From this and other circumstances I was led to conclude that the difficulty of deglutition was merely a symptom of some other disease. The lady's face was bleached, as if she had suffered from repeated attacks of hæmorrhage, and her feet were in some degree œdematous. On inquiry, I found that she had long laboured under internal piles, from which had taken place repeated discharges of blood. To this last disease, then, I directed my chief attention, prescribing a cold lavement to be injected every morning; and at the same time a solution of the sulphate of iron, and sulphate of quinine, to be taken three times daily, by the mouth. When this plan had been persevered in for three weeks the piles were much relieved; they no longer protruded externally; there had been no recurrence of hæmorrhage; her cheeks were less pale; and she swallowed with comparative facility. At the end of six weeks more the piles occasioned very little inconvenience; she had lost no more blood; her general health was much improved; and there was so little difficulty of deglutition, that I had no hesitation in recommending that, after her return to the country, she should swallow a bolus of Ward's paste three times daily, with a view to the cure of the hæmorrhoidal disease." 23.

Whatever the pathologist may think, the public are of opinion that the great object of medical science is the cure or alleviation of disease. Morbid anatomy has been latterly studied with industry and with success, but pathology, in a more extended sense, has been perhaps neglected. The Continental school regards patients as the raw material of musea, and the physician fully imbued with its spirit detects a pleurisy or a hepatitis with precision, traces its phases with scientific accuracy, and, after he has let his patient die, he points with triumph to the confirmation of his—diagnosis. In this country, the common sense of the best practical physicians and surgeons has made them chime in with the public sentiment, and prevented them from neglecting that most necessary part of physic—the treatment of disorders. Sir Benjamin Brodie is of the utilitarian school. He has shewn the student the characters and nature of nervous pains, has explained their laws, insisted on the study of their causes, and now he directs attention to their treatment. "Your patient," he says, "wishes to be cured; he has of course no other reason for consulting you." This is a consideration which seems occasionally to be quite forgotten. It is a reasonable one notwithstanding.

The great use of scientific investigation, is to prevent empiricism in treatment. If we have discriminated the various causes of nervous pains, we apply that knowledge to any case, and ascertain with as much precision as possible, the nature of the exciting cause in it. Such a plan will prevent the blind employment of what are called "nervous remedies," and will lead to the selection of such as are appropriate, and to rational experiments where no obvious remedy presents itself. It is almost as important to determine an incurable as a curable case. In the former instance we

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avoid doing harm, do not nurture false hopes, and support the reputation of medicine by our accuracy.

The treatment may be local or general.

1. Local treatment can be productive of little benefit, when applied to the part to which the pain is referred—supposing that the actual irritation is elsewhere. This is almost a self-evident proposition, and the conviction of it has occasioned the infrequency of operations for tic-douloureux, &c. Perhaps further reformations in this part of practice are still necessary.—The surgeon should be very cautious, for the diagnosis in some cases is difficult, and time and the effects of remedies are occasionally necessary elements in the data for a correct opinion.

"If the original disease operates immediately on the nerves of the affected part, producing in it pain, or muscular spasm or paralysis, you will have first to consider how far it is within the reach of topical remedies. If a tumor presses on a nerve, or if some foreign body, as a musket ball, or a piece of dead bone, irritates its surface, or is intangled in its substance, perhaps the tumor or the foreign body may be removed by a surgical operation, or the tumor may be reduced by other means. If this cannot be accomplished, or if the nerve itself be altered in structure, either from disease or injury, it will become a matter for consideration, whether the limb should be amputated, or whether the nerve should be divided. It is only under these circumstances that any advantage can be expected to arise from the division of the nerve. In ordinary cases of neuralgia, where the disease on which it depends is in the brain, or in some other distant part of the body, or where it is connected with some derangement of the general health, it is evident that such an operation cannot be recommended on any sound principle, and it need be a matter of no surprise that where it is performed it should so generally fail. Where nothing better can be done, and a cure is not within your reach, a palliative treatment may be productive of some advantage, and you may endeavour to mitigate the patient's sufferings by the use of the local vapour bath, or by the application of the opium, or hemlock, or what is still better, the balladonna plaster." 27.

As a disordered state of the digestive organs is a fruitful source of nervous affections, that should, when present, be corrected. When, as not unfrequently happens, a disposition to gout exists, the colchicum and other proper medicines may be given. When regular intermissions and periodical paroxysms occur, the sulphate of quinine, or of the cinchona, combined with arsenic, relieves them.

"But large doses of these medicines are sometimes required. A respectable medical practitioner consulted me, believing that he laboured under a disease of the spine. He complained of pain, which he referred to the inferior dorsal vertebræ, and which was so severe that he could, as he said, scarcely endure it. On inquiry, I learned that the pain attacked him always at a particular period of the night: that it lasted for a certain number of hours, and that he was free from pain, or nearly so, in the intervals. I recommended that he should take the sulphate of quinine procured at Apothecaries' Hall. He took as much as 15 or 16 grains daily without any decided amendment: but I was so satisfied of the efficacy of the remedy in such a case, that I advised him to increase the dose still further. At last he took half dram of the sulphate of quinine daily, and this effected his cure." 29.

Sir Benjamin concludes the Lecture, or Chapter, by relating some odd cases, which it is worth while to recollect.

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A. A gentleman who had long laboured under stricture of the urethra, became affected with periodical retention of urine, which recurred at a certain hour every night. The catheter was required once or even twice. After some time Sir B. Brodie prescribed quinine, and only one more attack was experienced.

B. "A lady about sixty years of age complained of a most distressing sensation of thirst, beginning about ten o'clok in the forenoon, continuing for five hours, and recurring daily. A slight degree of chilliness preceded the attack; and while it lasted, although the sense of thirst was such as to produce absolute misery, there was no perceptible dryness of the mouth and fauces, and the secretion of urine was natural. These symptoms had existed for several weeks. The patient appeared to labour under no other disease: she had, however, begun to lose flesh, and her complexion was sallow. The same symptoms had attacked her four years ago. At that time they continued for six months, leaving her thin and debilitated. I prescribed for her three grains of the sulphate of quinine to be taken three times daily. I have not seen her since; but at the end of four days I received a note to the following effect:—"Mrs. ———, the thirsty lady, has the pleasure to say that she is very much better; and she is much obliged to Mr. Brodie for his advice. She returns to the country to-morrow.'"

C. A lady suffered from a neuralgic affection of the face. Her medical attendant prescribed a preparation of valerian, and the pain in the face subsided; but immediately afterwards she began to experience a pain in one foot. This pain recurred in the early part of every evening. After a short time it was followed by redness of the skin, and tumefaction of the subjacent parts near the bases of the toes. These marks of inflammation continued to increase for some hours, and then subsided, leaving the foot of its natural appearance and free from pain. This went on for several months, when Sir Benjamin saw her, and advised the exhibition of quinine. In three or four days, the symptoms entirely vanished.

D. A lady laboured under an inflammation of her leg. The whole leg was swollen from the toes to the knee, the skin being red, painful and tender. These symptoms had existed for several weeks; the usual remedies had been employed, and no amendment had taken place; yet the inflammation did not proceed farther, and there were no signs of suppuration. At last Sir Benjamin observed that the symptoms varied considerably; that sometimes the redness, pain, and swelling had nearly subsided, and that at other times they were as strongly marked as ever; and that these variations always took place on the alternate days. She was now directed to take the sulphate of quinine. The effect was immediate, and a few days completed the cure.

In those cases in which the cause of the local nervous affection is organic disease of the brain or spinal marrow, an ultimate cure is of course out of the question. But the local symptoms may be mitigated by treatment, that is local pains may be so, for muscular spasms or paralysis are little under the control of art, though sometimes they spontaneously subside. For the local pains, applications of hemlock or belladonna, stimulating liniments combined with laudanum, and even blisters, may be advantageously employed.

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II. Various Forms of Local Hysterical Affections.

The second Lecture is occupied with the examination of the forms of local nervous affections. Amongst these, the most interesting, perhaps, to the surgeon, are the nervous affections of the joints. Simulating the organic lesions of the articulations, they are not unfrequently mistaken for them, and a true knowledge of their characters is indispensable to every practical man. These complaints are observed in all ranks, but particularly in the higher, and in *them* they constitute a large proportion of the affections of the joints. As we have on several former occasions alluded to this form of nervous disorders, it is only necessary at present to advert to the more prominent observations of our author. To him is due the merit of having been the first to direct attention to the subject, certainly of having first offered an accurate account of the complaint.

The hip-joint is frequently the seat of this hysterical disorder, and the following is the graphic delineation of it.

"There is pain in the hip and knee, which is aggravated by pressure and the motion of the limb, and the patient often lies fixed in one position on the bed or sofa. You will say, 'are not these indications of a diseased hip joint?' But observe further. The pain is not in general fixed in any one part: it belongs to the whole limb. The patient winces, and sometimes screams, when you make pressure on the hip, but she does the same if you make pressure on the ilium, or on the side as high as the false ribs, or on the thigh, or even on the leg, as low as the ankle: and every where the morbid sensibility is chiefly in the integuments. If you pinch the skin, lifting it at the same time off the subjacent parts, the patient complains more than when you forcibly squeeze the head of the thigh-bone into the socket of the acetabulum. As her attention is more directed to the examination, so the pain, which she suffers from it, is aggravated; and if her mind be occupied in conversation, she will scarcely complain of that, which would have occasioned torture otherwise. Then, there is no wasting of the *glutæi* muscles, and no flattened appearance of the nates; and the aspect of the patient is different from that which you would expect to find if the bones and cartilages of a joint were in a state of ulceration. Neither are there those peculiar and painful startings of the limb at night, attended often with frightful dreams, which mark the existence of this last disease. The pain will sometimes prevent the patient falling asleep, but, if once asleep, she sleeps soundly for many successive hours; and this state of things may continue for weeks, or months, or even for years, without leading to abscess, or any further ill consequences.—There may be a suspicion of abscess (I have known this in a great number of instances), but the suspicion is never realised. Sometimes there is a general tumefaction of the thigh and nates, the consequence either of a turgid state of the small vessels, or of an effusion into the cellular texture (I suppose of the former, as the parts do not *pit*, or remain indented after pressure); but this is entirely different from the swelling of an abscess. In a few rare instances there is a more defined and circumscribed swelling, but still it is altogether different from that of abscess. There is no perceptible fluctuation, and I can compare it to nothing better than a wheal of urticaria of unusual magnitude. A careful examination will always enable you to distinguish these swellings from abscess. For the satisfaction of others, I have sometimes made a puncture with a grooved needle, or some other convenient instrument, the introduction of which would have detected matter, if matter had existed.

I have said that, in these cases, there is no wasting of the glutæi muscles, and

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no flattened appearance of the nates. It is, however, not uncommon to find much alteration in the figure of the parts, of another kind; namely a bulging of the pelvis posteriorly, at the same time that it is elevated, on the side of the disease, so as to make an acute, instead of a right angle, with the column of the vertebræ. Of course, under these circumstances, the limb is apparently shortened, and when the patient stands erect, the heel does not come in contact with the ground. A superficial observer may be led to believe that there is an actual dislocation of the hip; and, indeed, it requires a careful examination to enable the surgeon to understand that all this strange distortion is but the result of the predominant action of certain muscles, and of a long-continued indulgence in an unnatural position." 40.

It is scarcely necessary to dwell on the symptoms of this affection of the knee, or of any of the other joints. In all cases we observe, to a greater or a less extent, the following circumstances. 1. The pain is at least as much on the surface, as in the interior of the joint. 2. It is more diffused throughout the limb, than disease of the articulation would account for. 3. It is excited by such gentle manipulations as could hardly disturb the deeper structures, or give rise to pain dependent on disturbance of those structures. 4. It is not produced in a proportionate degree by pressure of the articulating surfaces together, or by those methods of examination which occasion pain when the joint is actually diseased. 5. However excruciating it may appear at one moment, it will not be exhibited the next, if the patient's attention is adroitly drawn off. 6. We may say that in very many cases pain may be found in various parts of the body, provided the patient's attention is ingeniously directed to the part to be examined. 7. There *are* the general marks of the hysterical habit, and there *are not* the usual evidences of serious organic disease.

Our author proceeds to point out some further circumstances, which contribute to the completion of the history of the disorder, and to the assistance of the surgeon in his diagnosis.

A. The patients are, for the most part, not much above the age of puberty.

B. The menstruation is frequently irregular, but sometimes it is not.

C. Those who labour under habitual coldness of the hands, have a weak small pulse, and afford other indications of a feeble circulation, are more liable than others to suffer in this manner; yet occasionally we find these symptoms existing in combination with a florid countenance and a sufficient development of animal heat.

D. In some instances the joint to which the symptoms are referred, and even the whole limb, is affected with a remarkable alternation of heat and cold. Thus in the morning the limb may be cold, and of a pale or purple colour, as if there were scarcely any circulation of blood in it; while towards the afternoon it becomes warm, and in the evening is actually hot to the touch, with the vessels turgid and the skin shining. Sir Benjamin has never known any bad consequences result.

E. The patients may have had hysteria, prior to the occurrence of the local symptoms. The former may recur and the latter be abated or quite pass away.

F. A severe illness inducing great exhaustion, may have preceded the development of these symptoms. Or they may be traced to a moral cause.

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A moral agency too may cure them. In many cases we cannot reasonably blame the patient, or lay the symptoms to the account of dissimulation.—But, on the other hand, it must be admitted, *that* females of the strongest minds and most moral sentiments are both least prone to these affections, and most easily cured when they have occurred—*that* in some instances the mind does appear to be strangely warped—and *that* sufferings are exaggerated, if not absolutely feigned. Our judgment must be formed in each case upon its circumstances, but good feeling and reason combine to incline the surgeon to the opinion most favourable to the honour of his patient.

"Although there are none of those painful and involuntary startings of the limbs which occur in combination with caries of the joints, spasmodic actions of the muscles of the limbs are not uncommon in the cases of which I am now speaking. In some instances convulsive motions of the limbs are produced by pinching, or even by lightly touching the integuments. These bear no very distant resemblance to the movements of chorea; and it is worthy of notice, that they do not occur if it can be managed, at the same time, that the attention of the patient should be otherwise directed. I have also known them to take place independently of any manifest exciting cause. In some cases, which have fallen under my observation, the limb was at irregular periods violently agitated, so as almost to throw the patient off her couch." 43.

There is always a sense of weakness in the limb, which, of course is augmented in proportion to the continuance of inaction of the muscles. When the other symptoms have passed away, this may remain; and if the limb has been long in the horizontal posture, the foot, when first put to the ground, assumes almost a purple colour, the consequence of a yet imperfect circulation.

The symptoms for the most part come on gradually, and gradually too, they pass away. But occasionally they vanish all at once, and, as they are not the result of an actual organic lesion, we cannot experience surprise at their doing so. A young lady, for example, was seen by Sir B. Brodie in 1834. She laboured under symptoms simulating disease of the hip-joint. A short time back, Sir Benjamin was informed by Dr. Mortimer, surgeon of Haslar Hospital, that her symptoms continued nearly unaltered for two years, when, one night, on turning herself in bed, she said that she had a feeling as if something had given way in her hip, and from that moment she was well. It is of consequence to remember that such sudden cures may happen, because they will explain the influence of trifling remedies, of quackery, or of religious enthusiasm. Such miracles as those of Hohenlohe are most easily performed on patients of this character.

The spine is not unfrequently the seat of these affections. They are far too often confounded with disease of the bodies of the vertebræ or of the intervertebral cartilages, and this mistake entails on the unhappy patient caustic issues, setons, long confinement in the horizontal posture, the serious remedies in short for a serious disease. This is indeed a cruel blunder. A young lady is confined during the best years of her life to the horizontal posture, tortured by severe remedies, perhaps irretrievable damaged in health, when pure air, gentle exercise, and cheerful occupations might have banished the disorder in the course of a few months.

"In these cases the patient complains of pain and tenderness of the back, to which one or more of the following symptoms may be superadded tending very

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much to mislead the medical or surgical attendant:—Pains in the limbs, especially in the lower limbs; a sense of constriction of the chest; involuntary spasms of the muscles, sometimes induced by change of position, at other times recurring without any very evident cause; a sense of weakness in the lower limbs, so that they are scarcely capable of supporting the weight of the body; and even actual paralysis; difficulty of voiding the urine. When the patient first complains of pain in the back, it must be acknowledged that there is some difficulty in forming a positive diagnosis; but the difficulty vanishes afterwards, so that none but a superficial observer can have any doubt as to the real nature of the disease. The pain in the back is seldom confined to a single spot, but it extends to different regions of the spine, and it not unfrequently shifts its place from one part to another. The tenderness of the spine is peculiar. The morbid sensibility is chiefly in the skin, and the patient, for the most part, flinches more when the skin is even slightly pinched, than when pressure is made on the vertebræ themselves. The pain is, in the majority of cases, more severe than in those of real vertebral disease; and the spasms of the muscles have a near resemblance to those of chorea. Where there is paralysis, or a tendency to paralysis, it is quite different from what is observed in cases of pressure on the spinal cord or brain; and I may take this opportunity of observing, with respect to hysterical paralysis generally, that it has this peculiarity: *it is not that the muscles are incapable of obeying the act of volition, but that the function of volition is not exercised.* The accuracy of this observation will, if I am not much mistaken, be acknowledged by all those who are at the pains of studying these cases with the attention which they so well deserve; and the importance of it in medical and surgical practice is sufficiently obvious. There are still other circumstances which may assist us in forming our judgment; such as the general aspect of the patient, and her condition in other respects; her time of life; the state of the menstruation; and especially the liability to the more common hysterical affection." 48.

Surgeons occasionally apply a hot sponge, as a means of distinguishing caries of the spine. This is not unlike the old ordeal by fire—there is no getting out of it. If merely touching the skin, gives pain in nervous affections, it can hardly be anticipated that applying a hot sponge to it, will not give pain too. In short, neither reasoning nor experience countenance such a mode of diagnosis.

Retention of urine is well known to be a common hysterical symptom. It is not that the muscles concerned in the act of expelling the urine are incapable of obeying volition, but that volition itself is not exercised.—When this has been the case for a certain length of time, the bladder, constantly distended, becomes really paralysed, and may be affected with chronic inflammation of its mucous membrane. In a case which occurred to Sir B. Brodie, hysterical retention of urine having been long neglected, forty ounces of urine were at last drawn off by the catheter; and, on the post mortem examination, the bladder was found of very large size and of almost a black colour, its muscular fibres much wasted, and its mucous membrane presenting the appearance of a very thin fibre, readily separable from the parts below.

"Females who labour under hysterical retention of urine, if left to themselves, usually recover in the course of a short space of time; sometimes almost suddenly; but if the catheter be employed, their recovery may be protracted for an indefinite period. We may lay it down as a general rule, that in these cases the catheter should not be had recourse to: and the only exceptions to it are in those extreme cases in which actual paralysis has taken place, and the bladder is likely to become diseased, if not artificially relieved." 50.

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Hysterical retention of urine affords, perhaps, as good an instance as any of the composite character of these affections. If a girl in a hospital labours under this retention, and if a dresser or house-surgeon can be got to draw off her water regularly, she makes no effort to relieve herself, nay, will rather suffer to a great degree than do so. It is impossible for any one who is practically conversant with cases of this sort, not to be convinced that the patients *like* the species of attention they receive. But if a catheter is secured in the bladder, and the manipulations of the surgeon are no longer necessary, they usually soon get tired of the restraint, and void the urine without the assistance of an instrument. Nothing is more common than such an occurrence in hospitals, and the surgeon must remember that it is the character of many of these nervous symptoms to grow by indulgence, and to nurture, if great caution is not exercised, perverted moral sentiments.

Hysterical aphonia, or loss of voice, is another symptom which may take place suddenly, continue long, and disappear as suddenly as it began. This is not unfrequent in the male sex, especially in persons of the clerical profession, whose voices are occasionally much exerted.

Nor is tympanitis rare in hysterical females. Sir Benjamin conjectures that the majority of cases of ovarian dropsy, supposed to be cured by iodine and other remedies, have been really instances of tympanitis. The diagnosis is obvious, nor is it difficult. On percussion, fluctuation is absent, and extreme resonance is present. The patient floats in the warm bath, if accidentally put into it. An elastic gum tube, passed into the upper part of the rectum, will evacuate, if pressure is made on the abdomen, the greater part of the air, which soon, however, re-accumulates. A stimulating injection, made with the confectio rutæ, will sometimes produce a similar effect.

We can experience no surprise at finding that the breast is occasionally the seat of these hysterical affections. The case has been described by Sir Astley Cooper, in his Observations on the Diseases of the Mamma. The symptoms wear the family likeness. Heightened sensibility, residing not only in the gland but in the skin, and not only in the breast, but in its vicinity, and even at a distance from it—the absence of complaints of pain, if the girl's attention is diverted from the local examination—the want of any tumor in the first instance, and the presence of only slight enlargement or of general fulness, even when the malady has existed long—and, finally the general condition of the individual, are here, as elsewhere, the distinctive characters of a hysterical disorder.

"These cases are to be distinguished from those of a rare kind of irritable tumour of the breast, of which a representation is to be found among the plates annexed to Sir Astley Cooper's work. I conceive that they ought also to be distinguished from those which may occur at any time of life, and in women who have no particular disposition to hysteria. In the cases to which I now allude, the pain and tenderness are much less than in the true hysterical affection of the breast, and it will be almost invariably found that the patient has witnessed the miseries of some friend or acquaintance who has suffered from carcinoma. No part of the body will bear that rigid scrutiny to which the breast is subjected under these circumstances. Close attention will discover in any, even in the most healthy organ, sensations which had been previously overlooked; and constant anxiety on the subject may magnify such sensations into pain. In these last-mentioned cases a strong assurance that no disease exists will make the pa-

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tient happy, and remove the pain; but no such assurance will be adequate to the cure of a genuine hysterical affection." 54.

Constipation of the bowels is a frequent occurrence in hysterical patients. Sir B. Brodie has known this mistaken for stricture of the rectum. Indeed it is extraordinary what a facility some surgeons possess in discovering stricture of the rectum. Constipation being complained of, a long bougie is introduced into the bowel. It hitches in some of the folds, or is obstructed at its curve on the brim of the pelvis. That is conclusive evidence of the existence of stricture of the rectum, and the patient is subjected to an useless and a worse than useless course (at all events to *him*) of long bougies. To revert to the hysterical constipation we were speaking of: Sir B. Brodie suspects that, in the majority of instances, it is similar in its nature to hysterical retention of urine, that is, the patient does not properly exert volition, unless the accumulation of fæces is excessive.

Hysterical difficulty of deglutition is probably an analogous affection. It is likely to be mistaken for stricture of the œsophagus. Yet it is not that the muscles are in a state of spasm, but that they are not effectually exerted.

Symptoms resembling those of tetanus occasionally present themselves in hysterical individuals. They may assume the form of trismus, or of opisthotonos—and it may be well believed that *such* tetanus is curable, and has been reported cured.

If these local hysterical affections are developed without any local injury, it is, à fortiori, probable that, in persons prone to them, they would be likely to occur when such injury has directed the patient's attention to a part. Now this is an important circumstance to bear in mind, for it will correct some erroneous opinions which have been generally entertained. Symptoms have been constantly attributed to injuries of particular nerves, and operations have been proposed or performed in accordance with such notions, when the source of the disorder was to be sought in the general state of the system. Sir B. Brodie's remarks on this head are valuable.

"A woman (he observes) is bled in the arm. She complains, perhaps, of severe pain at the time; but this subsides, and the wound heals, as under ordinary circumstances. Then she complains of pain again, extending down the forearm to the hand, up the arm to the axilla and shoulder, and even to the side of the neck, and sometimes down the side of the chest also: the extent and degree of pain varying in different cases. You examine the cicatrix, but can discover nothing unusual in it; but the patient flinches when it is touched. She very commonly complains of the surgeon, saying that she was badly bled, or bled with a blunt lancet, or a foul lancet, or that a nerve was pricked which ought not to have been touched; while the real origin of her symptoms may be traced to the peculiar state of her own nervous system. If you investigate the case further, you will always find that she has been liable to various nervous symptoms previously to those which are attributed to her being bled; and when these last disappear, nervous symptoms of some other kind shew themselves.

In another case, the patient has received a blow on the head. In order to avert the consequences which such an injury may be expected to produce, she is bled repeatedly, takes aperient medicines, and is kept on a low diet. When her physical powers are thus reduced, she complains of pain in the head even more than she did in the first instance: but the pain is of a different character, and is usually attended with other symptoms, such as do not belong to inflammation. Thus she has a sense of dizziness, or a feeling as if water was trickling over

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her head. Then the countenance is blanched, the skin is cool, and the pulse is probably small and quick, and weak. If under these circumstances, the surgeon, mistaking the nature of the case, continues to abstract blood, and to keep the patient on a low diet, all these symptoms become aggravated; other symptoms of a more decidedly hysterical character shew themselves, and no improvement takes place until a more judicious treatment is adopted. In another case, which is of no unfrequent occurrence, a young woman pricks her finger, or perhaps the finger is merely pinched. Soon afterwards, she complains of pain extending from the finger upwards, along the hand and fore-arm. This probably is followed by a convulsive action of the muscles of the arm, or by a continued contraction of the flexor muscles on the anterior part of the arm, so that the fore-arm is kept permanently bent; at least while the patient is awake, for the spasm is generally relaxed during sleep." 57.

The symptoms, which, in these patients, sometimes follow a local injury, occasionally proceed to an extent which could hardly be anticipated.

Case. A young lady, eleven or twelve years of age, pricked the fore-finger of her left hand with the point of a pair of scissars. This was immediately followed by pain in the course of the median nerve, and on the following day the fore-arm was fixed, by muscular contraction, at a right angle with the arm. After a few days, all the muscles of the hand and fore-arm were affected with violent spasms, producing strange convulsive movements of the hand and fore-arm. These were attended with sickness and vomiting, so that for two days, whatever was received into the stomach was immediately rejected from it. By degrees the other limbs became affected in the same manner, and it was impossible for the patient to walk, or even to stand. Sometimes the diaphragm was affected so as almost to threaten suffocation. At other times the jaw was closed by a contraction of the masseter muscle, or she lay in a state of opisthotonos. Occasionally there was a violent pain in the head, which was described as having the same character as that of the finger which had been pricked. These symptoms continued to alternate with each other for some time, when recovery took place.

"I have seen several cases of a singular affection of the hand and wrist, which manifestly belongs to the class of cases of which we are now treating. It occurs in females who have a disposition to hysteria, especially in those who have suffered from mental anxiety and over-exertion, and is usually, but not constantly, referred to a sprain, or some other slight accident. The patient complains of pain in the back of the hand and wrist, trifling at first, but gradually becoming more severe. In many instances, after some time has elapsed, there is a diffused swelling of the soft parts, extending a short distance up the lower extremity of the fore-arm; and downwards as low as the fingers. This swelling is not attended with redness of the skin; and having lasted for a few weeks, it subsides, while the pain remains, constant in its character, aggravated by every motion of the limb, and always more severe in proportion as the patient's attention is in a greater degree directed to it. To prevent the motion, which she so much dreads, the patient keeps her hand in one position, and the consequence is that the joints become comparatively stiff, the hand at the same time having a very characteristic appearance, the skin being smooth and shining, and appearing to adhere more closely than is usual to the parts beneath. This state of things may continue for three months, for six months, or even for one or two years; the symptoms then gradually subsiding, without leading to any further ill consequences. The result, however, is not always so fortunate. I attended a lady

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who laboured under the symptoms which I have just described, with the late Dr. Luke. She left London on a visit to the continent, without any amendment having taken place. I saw her again after the lapse of four or five years: the muscles of the fore-arm were at this time wasted and paralytic; the whole hand was shrivelled and useless; the fingers permanently contracted towards the palm of the hand; the nails thin and scabrous." 60.

Sir Benjamin concludes the lecture, by mentioning some rare and rather whimsical cases, which have fallen under his own observation.

1. He was consulted on the case of a young lady, who was liable to fits of incessant sneezing, attended with a most abundant flow of watery fluid from the nostrils, in which there was no perceptible disease. She had also occasionally nervous cough, globus hystericus, or ordinary hysteria.

2. A married lady, aged 37, had similar fits of sneezing and watery discharge from the nostrils. These symptoms attacked her once a week, and in each attack she sneezed not less than a hundred times. She had also disagreable nervous sensations in the face and palate. At the end of three years from the commencement of the disorder, the fits of sneezing occurred only once in a month, but she complained of an aching pain, and a sense of pulsation in the roof of the mouth, the teeth, and tongue, occurring chiefly in the night and then severe.

3. An unmarried lady, aged 32, had distressing paroxysms of dyspnœa, attended with great general agitation and excitement. The singular feature of the case was this:—There was a particular spot near the ensiform cartilage, which she believed to be in some way or another connected with her complaint. Nothing could be discovered in this part different from what is usual, by the most strict examination; but the pressure of the finger on it never failed to induce one of the paroxysms before alluded to. When these were most severe, they were attended with an abundant flow of limpid urine. They had existed more or less for ten or twelve years, and originally supervened on the exhaustion occasioned by an attack of typhus fever.

4. A young married lady, who was liable to ordinary attacks of hysteria, complained of a tender spot on the anterior part of the abdomen, a little below the ensiform cartilage. The slightest pressure of the finger on it caused excessive pain, and was followed by violent agitation of the whole person, bearing a more near resemblance to the convulsive motions of *chorea* than to any thing else, and continuing for several minutes.

Here we are compelled to pause. The conciseness of our author's style precludes much condensation—the value of his facts forbids many omissions—and, insensibly, we have exceeded the limits permitted to us. One lecture remains. A valuable one, because it inculcates the principles of treatment, but too long to enable us to pursue it now. We will return to it in our next number, and conclude our account of this excellent practical volume.

HYGIENE PUBLIQUE, PAR *A. J. B. Parent-Duchatelet.* 2 Tomes. Pp. 552 and 704. Bailliere, 1836.

M. DUCHATELET is already known to our readers, as the author of the re-

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markable work on Prostitution, which has been reviewed in the two last numbers of this Journal. The present one consists of a series of Memoirs on subjects connected with public hygiene, more especially in reference to the state of Paris and its environs.

A short biographical sketch of the author is prefixed by his friend, M. Leuret, to whom was confided the publication of the work. From this we learn that M. Duchatelet, renouncing the profession, in which he had fair hopes of a bright success, had devoted the last fifteen years of his life to the prosecution of a calling, which, although dangerous as well as repulsive and even disgusting, must be allowed to be of great importance, and one on which the health of large cities, and the comfort and convenience of individuals so much depend. He assures us himself, that he had traversed and examined almost every sewer in Paris, had conversed with almost all the workmen, had assisted them in their labours, had accompanied them to the most infected spots, had spent days and even weeks in the Augean stables of filth and nastiness in the neighbourhood of Paris—Montfauçon and Bondy —had visited repeatedly all the workshops of the tanners, the preparers of animal grease, glue, music strings, Prussian blue, &c. and that he thus acquired an intimate acquaintance with almost every hole and corner of the metropolis. He was long one of the most efficient members of the council of health (Conseil de Salubrité), and repeatedly applied to by Government for information relative to many of the public works. Numerous were the reports which he drew up and published at different times. The substance of these will be found in the two volumes under review. We propose now to give a short analysis of the most important of these. The first, to which we shall call the attention of our readers, is one on the past and present state of the dissecting-rooms in Paris.

An historical sketch of these, during the last century, is detailed with great minuteness. He mentions many curious particulars respecting the extreme difficulty of prosecuting anatomical studies in Paris, and the numerous obstacles which the teachers experienced in procuring bodies for dissection, during the early and middle parts of the last century. We were not aware, until we perused M. Duchatelet's work, that there had been no public or recognized amphitheatre of anatomy there, before the time of the great Dessault. To this distinguished surgeon was due, it appears, the merit of having overcome the national prejudices against the prosecution of dissecting, and of having first established openly rooms for the purpose. His example was followed, a few years afterwards, by several of his pupils, among whom we may enumerate Dubois, Lallemand, Bichat and Boyer. All these celebrated men were teachers of anatomy, and superintended for many years private dissecting rooms.

At this period, the supply of bodies must have been scanty and not easily obtained. Very few were procured from the hospitals; and hence recourse was necessarily had to the church-yards, which were then numerous within the walls of Paris. The state of the dissecting-rooms was, from all accounts, most shocking and repulsive. They were small, miserably inconvenient, being often situated in the attics of an inhabited house, filthy beyond description, and therefore not a little offensive to the neighbourhood. Complaints upon complaints had been made against the continuance of such a nuisance, and the local police of the town had repeatedly made attempts to

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correct and improve the state of things. But what with the state of agitation and confusion which prevailed for so many years, before Buonaparte seized the reins of government, and other causes which M. Duchatelet alludes to, it would seem that no effectual step towards any change was taken until the year 1806, when a commission was instituted to examine into the state of the medical schools, and more especially of the dissecting-rooms throughout Paris. The late Baron Dupuytren was one of the number, and to him was entrusted the charge of drawing up the report. Certainly none was better qualified to advise Government on such a subject. He himself had been for many years a teacher of anatomy in the metropolis, having been first the assistant, and then the successor of the immortal Bichat. The most important suggestion in the report was that, wherein the commission recommended that all the small private schools should be thenceforth abolished, and consolidated, as it were, into two great central establishments; one to be appertaining to the faculty of medicine, the other to be attached to the Hôpital La Pitié. We are told that Napoleon himself took considerable interest in these affairs, and that he had designed some important changes in many of the medical institutions of his metropolis. Certain it is, that about this time, 1806, he had given orders that the present decayed building of the Hôtel Dieu should be demolished, with the view of reconstructing it upon a grand and more commodious design, not only as a hospital, but also as a great central school of instruction.

This project, like many others of the same mighty architect, has, it is well known, never been carried into effect. Even the vile, filthy dissecting rooms, of which there used to be so many around the hospital, continued to exist for several years afterwards; and it was not until 1813 that M. Pasquier, then the Prefect of police, issued the ordinance, by which all the private schools were abolished, and the suggestion of the commission was carried into effect—viz. the establishment of only two great anatomical amphitheatres. For some time previously a very important change, in the mode of procuring subjects for dissection, had taken place. We have already mentioned that, in the time of Dessault, and of his immediate successors, the cemeteries within the barriers had yielded the supply of bodies for the anatomists; but, after Napoleon had ordained the removal of all the churchyards to the outside of the walls, and the disinterment of bodies was prohibited by severe penalties, the bodies of those who died in the hospitals and hospices of the metropolis were appropriated for the purpose.

The centralization of the dissecting-rooms gave great offence to many of the young teachers and professors of the private schools; and various attempts were made to evade the enactment. These attempts have gradually succeeded; and hence, at the present time, there are dissecting-rooms, not only at the La Pitié Hospital, and at the Ecole de Medecine, but also at the Salpetriere, Maternité, St. Louis, Beaujon, and Charité Hospitals. From M. Duchatelet's enquiries, it appears that, between twelve and fourteen hundred bodies are dissected annually at the La Pitié rooms, and not fewer than a thousand at those of the School of Medicine. Most of the English, and other foreigners, who go to Paris for anatomical instruction, dissect at the former.

Our author examines at great length the question, whether the existence of anatomical amphitheatres in a city is at all injurious to the public

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health; as, some years ago, it was often urged against these establishments, that they were so many "foci" of infectious emanation. He has quite satisfied himself that there is not a shadow of truth in this statement; and, among other arguments, he appeals with confidence to the healthy state of the Hôtel Dieu in former years, when this hospital was surrounded by numerous dissecting-rooms, some of which were even within its walls. He next adduces the testimony of a great number of eminent authorities to confirm his opinion. The first he quotes is the late M. Lallemand, who has left us an account of the dissecting-rooms first established by Dessault. They were, it appears, situated on the top story of an old decayed house. The number of bodies usually on the tables was from 50 to 60, and the number of pupils 200 or more. The rooms were very seldom cleaned, and even the debris of the bodies was not removed oftener than once a month. Nothing could exceed the abominable stench diffused over the immediate neighbourhood; and yet, says M. Lallemand, we never heard of any diseases, which might be fairly attributed to the presence of the dissecting-rooms, either among the students themselves, or among the inhabitants of the adjoining houses. Dessault himself used to say, that he really believed that the *odorous* air of his dissecting-rooms saved him from attacks of epidemic and other disorders, of which those hospital physicians and surgeons, who seldom or never dissected a dead body, seemed to be much more susceptible than himself. He took pleasure in repeating the old saying—"morte la bete, mort le venin;" and therefore he did not feel at all desirous, he said, to alter the state of the rooms under his charge.

M. Duchatelet next appeals to the testimony of Dubois, Dupuytren, Boyer, and of a host of others still alive, who have been, or still are, teachers of anatomy. They all agree in opinion, that it is quite an error to suppose, that the air of a neighbourhood is ever contaminated—so as to induce disease—by the emanations from dissecting-rooms, or that the students ever suffer from breathing the impure air of these places.

M. Duchatelet applied to M. Andral, among many others, for his opinion on this subject. The following is an extract from his letter:—"As to the diseases which medical students contract during their dissections, we have no good grounds for attributing them to cadaveric emanations. Gastro-enterites, meningites, and typhoid fevers, are very frequent among the students during the first year of their stay in Paris; but these diseases depend so little upon the mere circumstance of the 'sejour' of the students in the dissecting-rooms, that they are more common among those who have not begun to dissect. Indeed the mortality among the medical pupils is certainly not greater, than among an equal number of any other class of young men. The fatigues of study, the late hours, the intellectual exertion at home for the concours, &c. are much more hurtful to the constitution, than the labours of the dissecting-room. I have taken the trouble to ascertain the general health of the servants of the amphitheatres—and some of them pass day after day there without once going out—and it appears that they are quite as healthy in every respect, as other men."

With respect to the health of the students themselves, M. Duchatelet has taken great pains to discover, whether there are any good grounds for supposing, that it is affected by the air and the labour of the dissecting-room. According to his account, the most frequent complaint among these youths

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is dyspepsia, attended often with colicky pains and diarrhœa. But these symptoms are, says he, attributable much less to their engagements in the dissecting-rooms, than to the imperfect or improper diet, which the "res angusta domi" imposes upon many of them. Not a few of the French students, especially those who arrive from the provinces, are but scantily provided with even the absolute necessaries of life. M. Duchatelet assures us that he has known several, who have lived for weeks, aye and months too, upon stale bread, and an occasional glass of brandy.

It may be worth while to notice also the usual good health of the servants of the anatomical theatres. Many of them live within the premises; yet they do not suffer any direct inconvenience; and it has been often remarked that these men are singularly exempt from febrile diseases.

The mention of these "garçons" leads M. Duchatelet to allude to a practice, which seems to have been, some years ago, (and may be still), very common among them, but which probably is quite unknown to most of our readers. It appears that they were in the habit of collecting all the fat from the dissected bodies, and selling it to the enamellers, manufacturers of pearls, and other artisans, who require that the lamps, which they use at their work with the blow-pipe, should have a steady strong flame. Human fat, we are told, is better suited for this purpose, than that of other animals, from its remaining more uniformly fluid. Horse and dog grease is what is commonly used; and, as *such*, the fat from the dissecting-rooms had been sold. M. Duchatelet mentions that two thousand litres of human fat were found, some time ago, in the possession of one of the servants attached to an anatomical amphitheatre. This man confessed that he intended to have sold it, and that for several years he had made a good deal of money in this way.

The police applied to the Academy for information, on the means of distinguishing human fat from that of other animals. It seems from the following extract of the report, drawn up by Dupuytren at the time, that the question does not admit of an easy solution:—"Les graisses d'homme, de cheval, et d'âne ne peuvent etre distinguées entre elles, parcequ'elles ont toutes une coleur jaune, une concrescibilité tres faible, une très grande fetidité, et qu'elles se precipitent en globules."

But to return from this digression, to the question as to the influence of the exhalations from putrid animal bodies on the health of those engaged in dissection, M. Duchatelet mentions that, it has been conjectured by some, that the effluvia from human bodies are not so injurious as the emanations from those of the lower animals. It appears, however, that this idea is not warranted by experience.

M. Rousseau, who has, for six and thirty years, been the superintendent of the anatomical preparations at the Jardin des Plantes, assured M. Duchatelet, that neither he, nor any of his assistants, has ever suffered from their occupations, even during the Summer, although the bodies of the animals dissected there are often excessively putrid.

Our author, not satisfied with the preceding authorities, appeals to the testimony of Mr. Lawrence of London, contained in a letter which this eminent anatomist wrote many years ago, to Dr. Bancroft, and which is cited by Dr. Warren in the Boston Med. and Surg. Journal. Mr. Lawrence mentions the case of the servant, who, with his family, lived for ten years

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under the dissecting-rooms at St. Bartholomew's Hospital, without suffering the slightest derangement of health.

The means, which M. Duchatelet proposes for the purpose of purifying anatomical rooms, and to keep them in a *sweet* state, it is scarcely necessary to notice; as, in truth, they only consist in recommending cleanliness, free ventilation, the removal of all the debris as speedily as possible, and the use of the chlorides to the floors and tables.

He has described and delineated a dissecting table of a particular construction, which may be of use, when it is an object to preserve a body from putrefaction for a great length of time, or to examine one already much decayed. This table is boarded all round, and perforated with numerous holes, which communicate with a flue terminating in the chimney.

The effect of this contrivance, when there is a fire in the grate, is to cause a continued current of air to pass from within the room towards the chimney. The body on the table is thus exposed to a constant ventilation; and, moreover, the offensive effluvia are prevented from being diffused through the air.

From the subject of the dissecting-rooms, we pass on to the report of our author on the recent disinterment of a number of putrid bodies, from the vault of a church in Paris.

As soon as the uproar and bloodshed of the three "glorious days" had ceased, it became one of the earliest duties of the Provisional Government to provide interment for the unfortunate victims of the struggle.

In some of the streets the dead bodies lay in dozens, heaped and piled together; and already, in consequence of the hot weather, many of them had become most offensively putrid. There were upwards of two hundred deposited at the Morgue, and almost as many under the Pont Notre Dame.

At first it was proposed to dig a large grave for these in the Gardens of the Archbishop's Palace, which is situated close to the Cathedral; but the officers of the Hôtel Dieu very properly objected to this proposal, as the air of the hospital might have been thereby contaminated, and the health of the inmates seriously injured. The bodies, therefore, were put into barges, and floated down the river as far as the Bridge of Jena, opposite the Champs de Mars, and there buried.

M. Chevalier had the charge of superintending the removal; and, by the judicious arrangements which he made, not one of the workmen, employed in the offensive occupation, suffered. Large quantities of chloruret of lime, both in its dry and its liquid state, were used for the purpose of disinfection.

While these steps were taken at one part of Paris, the people in different quarters had, of their own accord, dug deep pits, wherever there was a vacant spot, and had buried the bodies in heaps. No injurious consequences ever followed, as far as we know, from this proceeding. But in one neighbourhood, that of the Rues Montmartre and Mont-orgueil, a number of bodies having been collected together under the portico of the church of St. Eustache, it was unfortunately resolved to deposit them in the vaults underneath. There they lay for some weeks, until the air of the church became so offensive, that no service could be performed in it, and the inhabitants of the adjoining houses began to complain of the fetid emanations. The subject was referred by Government to the Council of Health, for their advice as to what steps ought to be taken. At first it was proposed to do

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nothing more, than to re-open the vault, and to introduce a quantity of quicklime over the spot where the bodies had been thrown in, for the purpose of accelerating their decomposition, and also of counteracting, it was hoped, the offensive effluvia. But this inefficient measure was very properly rejected. A committee, which contained among its members M. Labarraque, the famous chemist, M. Andral, and our author, was deputed to ascertain particulars, and to suggest what should be done. These gentlemen quickly determined on the necessity of removing the bodies, however decayed and putrid they might be. M. Labarraque proposed to superintend himself the operations. Having had all the windows of the church opened, he had a number of buckets, full of the solution of the chloruret, placed in different parts. The workmen also washed their hands and faces well with it. When an opening was made into the vault from the floor of the church, a quantity of the chloruret was thrown in, and one or two of the workmen (servants employed at the Morgue and in the public sewers) descended. M. Duchatelet immediately followed them.

He tells us, that the stench was not nearly so offensive as might have been expected. The floors and walls of the vault, and the dead bodies also, (some of which were excessively putrid,) were well washed with the chloruret. The bodies were then enveloped in separate pieces of coarse canvas which had been steeped in the solution, and were hoisted up into the church. The whole business was completed in little more than two hours, and not a single person engaged complained even of temporary inconvenience. The bodies were then conveyed to the great cemetry at Montmartre, and were all (43 in number), buried in the same grave.

The next memoir, which we propose to notice, is rather a lengthy and tedious one on the question, how far putrid effluvia affect the wholesomeness, and tendency to decomposition, of sound meat and other articles of food. The motive, which M. Duchatelet alleges for his minute examination of this subject, is that it has been repeatedly stated, even by professional and scientific men, that the health of the inhabitants, who live in the neighbourhood of slaughter-houses, dissecting-rooms, public sewers, &c., has suffered, not only from respiring a vitiated atmosphere, but also from their food becoming quickly corrupted.

To settle this question, he visited almost every hole and corner of Paris,—such as the neighbourhood of that most abominable sewer-like stream, the Riviere de Bievre near the Gobelins; many of the laystalls, and especially that incomparable stable of filth and nastiness, the enormous slaughter-house at Montfaucon, where not only between 12 and 13,000 horses are killed yearly, but almost all the ordure of Paris is collected together; the abodes of the workmen employed in the disgusting occupation of making music strings from the intestines of animals; not to mention the houses of the servants engaged in the Amphitheatres of Anatomy. The result of all his enquiries has been, that the almost constant effluvia of these places has very little or no effect in corrupting, or otherwise affecting, the wholesomeness of any article of food. Meat, broth, and vegetables, seem to be as easily preserved there, as in the healthiest and most airy districts of the metropolis.

Not content with this mode of enquiry, our indefatigable author carried on, for a period of five months, a series of direct experiments, in his own

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laboratory, to determine the question under consideration. He kept different articles of food, such as blood, milk, chicken-broth, mutton-broth, beer, wine, gruel, solutions of starch and gum, as well as meats of various sorts, surrounded with vessels filled with the most putrid and putrefying substances; and he found that, although they all (but in different degrees), acquired an offensive odour, they speedily lost this on being exposed to the air; and that they did not become decomposed sooner than other portions of the same substances, which had been kept in a pure place. It may be useful to know that, in conducting these experiments, M. Duchatelet discovered that, the substances might be preserved even from acquiring the slightest offensive odour, by covering their surface with a thin layer of oil; and also, that boiling will effectually remove it, after it has been acquired. The thicker and more viscid a fluid is, the less readily does it become impregnated with the fetid effluvia. Hence pure water is most quickly tainted; whereas solutions of gum, starch, gelatine, &c. are so, very slowly. We have, however, already stated that this taint may always be removed by exposing the fluid afterwards to the free air, and especially by boiling. It thus appears that putrid emanations act merely as any other odoriferous substance: the effluvia penetrate more or less easily the substance which may be exposed to their influence; but they do not cause any permanent or molecular changes in it, nor do they seem to accelerate, in the slightest degree, the tendency to decomposition.

M. Duchatelet has suggested a simple and very ingenious contrivance for the preservation of meat, and of other corruptible substances. He finds fault with the common plan of merely suspending them from the ceiling, as if the air was cooler there than nearer the floor. If, however, a tray holding pieces of ice, or a vessel of iced water be hung over them, a current of air from above downwards, and vice versa, will be occasioned: the cooled air descending, and being replaced by a volume from below. He also suggests the use of a table, constructed on the same principle as the dissecting table, which we have already described. These hints may possibly be useful. M. Duchatelet mentions, that one of the famous shops for "comestibles," in the Palais Royal, is provided with a table, such as he recommends.

Our attention is now called to another memoir, which although long—extending to 130 pages—is, nevertheless, very interesting. It is occupied with a minute account of those disgusting, but very necessary, establishments for the slaughter of old decayed horses, and for the flaying of all the dead dogs, and cats, not only in Paris itself, but also such as are brought from several miles round. These establishments are called "chantiers d'equarrissage;"* and, from what our author says of them, it would seem that the filth, stench, and nastiness of them is most insufferably horrible. Addressing his countrymen, he says: "You may well be proud of your markets and of your abattoirs, of your fountains which wash and refresh your streets, and of your sewers which dry and cleanse them; but is it not too bad, that every time you go out, and come into your city, 'qui se pretend la capitale du monde civilisé' (!), you run the risk of being suf-

* They are known, we believe, in this country under the name of "Knackers."

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focated by the vile emanations from the slaughter-houses and heaps of ordure, 'dont l'aspect seul fait reculer d'horreur ?' "

The largest of the "chantiers d'equarrissages" is situated at Montfaucon, a mile or so from the north-east extremity of Paris.* There is another, of smaller extent, on the opposite side of the river, not far from the Hospice de la Salpetrière. Various expedients have been proposed, not only by private speculators, but also by the public authorities, to obviate and counteract, if possible, the horrible loathsomeness of these establishments. At one time it was ordered, that the carcases of the beasts should be stripped at once, and that all the flesh, fat, and garbage should be daily buried in deep pits. But the proprietors, many of whom have made immense fortunes, petitioned against this most oppressive (at least to them) regulation. They had been in the habit not only of melting all the fat, which fetched a high price, but also of selling the flesh, bones, &c. to the farmers, for the purposes of manure; not to mention the profitable sale of the garbage, hoofs, &c.

In 1812, three gentlemen, who had a high name as most able manufacturing chemists, suggested an ingenious plan for diminishing the offensiveness of the "chantiers." It consisted in hanging up all the stripped flesh &c. in leaden chambers, and there exposing it to an atmosphere of steam for several hours. The fatty matters, being melted by the heat, drop down, and collect into a stream; while the fleshy parts are sodden, and therefore not liable to putrefaction. They are then to be pressed by a machine into large pieces, which are ready for sale to the sellers of dog and cat meat, to the farmers, and to the manufacturers of Prussian blue, &c. The Emperor Napoleon granted letters patent to these gentlemen; but we are not informed whether they have ever carried their project into effect.

In 1822, M. Dupuy, the professor in the Veterinary College at Alfort, petitioned Government to be appointed Inspector of the various slaughter-houses in and about Paris (to which, he states, there are annually brought between 7 and 8,000 horses—12,000 dogs, and 6,000 cats†), for the purpose of prosecuting his researches in comparative pathology; but this request was not complied with.

One of the abominable evils resulting from the "chantiers d'equarrissage" around Paris is, that the flesh of the dead horses has been secretly sold as food to the inhabitants, on many occasions. During the first revolution, it is well known, that there was, for a considerable length of time, a great scarcity of provisions; and we have the authority of M. Huzard, who had ample opportunities of ascertaining the truth, that a large portion

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* Several years ago, a company of "equarrisseurs" was set going in another district of Paris, and for a considerable time their affairs appeared to be very thriving. Unfortunately, however, for the concern, it was discovered that the pork and sausagemongers were in the habit of keeping an immense number of grunters near the "chantier," for the purpose of feeding them with the vile garbage of horse, dog, and cat-flesh. For several months, Paris might have been taken for a metropolis of Jews or genuine Musselmen; not a sausage or piece of pork were to be seen any where!

† This statement of the number of beasts taken to the "chantiers" differs, it will be noticed, from that given by our author. We are inclined to believe that M. Duchatelet may be depended upon for the accuracy of all his assertions.

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of the animal food, consumed during that period in Paris, consisted of horse-flesh. In 1803, the surreptitious sale of this was again discovered; and repeatedly in 1811, when, it is well known, all articles of food were exceedingly expensive, and there was much want and distress among the lower orders. The commissioners of police seized large quantities in the houses of several of the petty victuallers, in the indigent quarters of the metropolis. M. Pasquier, at that time head magistrate of Paris (Prefect of police), applied to the council of health for their opinion, whether the use of horse-flesh, as food, is injurious to health, or not. Like many other commissions, the one, appointed to report, returned a very dubious answer. M. Pasquier, therefore, acted upon his own judgment, and positively interdicted the sale of the flesh from the "chantiers d'equarrisage" *upon any account* or *for any purpose*. The very strictness of this injunction unfortunately frustrated its intentions. The vast number of dogs in and around Paris, not to mention the carnivorous animals in the Jardin des Plantes could not, it was alleged, be fed in any other way, but by the meat obtained from the horse-slaughter-houses; and hence permission was afterwards granted for the sale of this meat to certain persons, but only for the purpose now mentioned.

It seems, however, that as recently as 1817, there was a quantity of horse-flesh sold for human food in Paris; and in 1825, the committee, appointed to inquire into the state of the various laystalls about Paris, actually proposed to Government to permit the sale of horse-flesh for human food under certain regulations. This strange suggestion was very properly rejected.* It was, however, again proposed by some, after the last revolution in 1830 when great numbers of the poorer classes were quite destitute and starving. But although the practice was prohibited, it would seem that, even in the present day, a large quantity of horse-meat is sold in Paris. The following are the words of one of the commissioners of police, published not long ago:

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* Our author, indeed, seems rather inclined to permit the sale of horse-flesh, under certain restrictions. He tells us, that many of the men employed in the great slaughter-house at Montfaucon make use of it constantly, and that they do not suffer any bad effects from the practice. In Denmark, and also, we believe, in Sweden, the public sale of horse-flesh is authorised; and Baron Larrey informs us, in his great work on Military Surgery, that the wounded of the French army, in the Egyptian and Russian campaigns, were fed for weeks and even months upon horse-flesh, without any injury to their health. "The flesh of the horse (says he) makes a very good soup, especially if some lard is added to it; or it may be broiled, or prepared as 'bœuf à la mode,' mixed with proper seasoning. The liver, too, was highly esteemed by our soldiers in Russia. During the siege of Alexandria, the health of the troops was mainly preserved by the regular supply of horse-meat to them. It contributed very materially to the stoppage of a scorbutic epidemic, which had appeared among them. I repeatedly partook of the meat myself, and found it both palatable and nutritious.

After the battles of Eylau and of Eslingen, the wounded were fed upon horse-flesh for several days; and when, at length, oxen were procured, the soldiers did not recognize the difference. The cuirasses of the cavalry regiments served as utensils to boil the flesh in, and gunpowder was used in the place of salt, of which there was a complete want in the camp. 'Ce bouillon fut d'une tres bonne qualité.' Marshal Massena partook of the same fare, and highly approved of it."

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"Il est de notorieté publique que l'on vend, à raison de quatre sous la livre, chez divers restaurateurs de la capitale, de la viande choisie de cheval, nouvellement abattue; que ceux, qui ne peuvent ostensiblement faire entrer dans le jour de cette viande, vont à une heure, et à un lieu convenu, en jeter, par dessus les murs, des morçeaux considerables, qui sont à l'instant ramassés..... Ceci se pratique tous les jours."

It would seem, from what our author says, that even dogs and cats are often sold in Paris for human food. His own words are: "We have never visited this establishment (the slaughter-house at Montfauçon, appropriated to the skinning of these animals), without finding a number of them 'ouverts, depouillés, et troussés avec soin, tout prets enfin à faire cuire pour le repas auquel ils devaient servir." !!

But to return to the more immediate subject of our inquiry, that of the "chantiers d'equarrissage," we must refer such of our readers, as may wish to know particulars concerning them, to M. Duchatelet's work. There is a minute description given of the immense establishment at Montfauçon, in the immediate vicinity of Paris. He estimates the number of horses taken there, either dead or to be killed, at between 12 and 13,000 annually. A considerable proportion is sent from the country, within several miles around Paris The account which he gives of the wretched famished animals led there, in dozens, to be slaughtered, furnishes a sad commentary on the mercenary unfeelingness of man! The number is always greatest towards the end of the year; because *then* a number of the poor animals, which had been regularly *worked out* during the previous Summer and Autumn, are not deemed by their masters worth the expense of their *keep* through the Winter. They are therefore condemned to the slaughter-house, where they usually fetch from 10 to 20 francs a head.

There are four different methods in which the animals are killed: by blowing air into an opened vein, by pithing, by bleeding, or, lastly, by felling on the head. The third of these methods is the one usually adopted. A long knife is introduced into the thorax, in the direction of the arch of the aorta which is almost always divided: the animal staggers for a minute or so, then drops down, and expires in convulsions.

The only inconvenience of this method is, that the animal sometimes does not fall down on the spot, where he stood when wounded. Hence, when there are a number of horses crowded together in a small space, the "equarrisseurs" very frequently employ the last-mentioned method, felling; as the animal usually falls down on the spot. The animal is quickly stripped of its hide; the flesh is next cut off from all the bones, and heaped together for sale; the viscera are thrown together in large masses, and the carcase is then carried off to a corner in the yard.

We have omitted to state that the hair of the mane and tail is always cut off, before the animal is killed; but this, usually, has been done before the beast is taken to the slaughter-house. The hides are sent off to the tanners (most of whose establishments are on the other side of the Seine, adjoining the filthy stream of the Bievre, near the Gobelins); the flesh is divided into different heaps, some for human food (!), others for dog, pig, and cat-meat,*

* We are also told that many of the poultry-feeders about Paris give horse-meat to their ducks, geese, and fowls.

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and for the supply of the carnivorous animals in the Museum of Natural History. Some of the large dogs, kept in and about Paris, are trained to go by themselves to the slaughter-house, for a weekly supply at a time. The men know them, and fasten a large piece of the flesh round their necks, and off they go, thus loaded, to their masters' houses. What is not disposed of in these manners is, along with the garbage of the viscera, sold for manure, or to the manufacturers of Prussian blue, &c. The small intestines are sometimes used for the manufacture of the large coarse gut-strings. With respect to the blood of the slaughtered horses, M. Duchatelet expresses his surprise that it is not turned to more profitable account. Often it is allowed to flow on the ground, into which it soaks, forming a compost of most disgusting fetor; this is afterwards mixed with the dung, and sold as manure.

If the blood was collected and separated, by stirring, into its liquid and its solid part, the former might be advantageously sold to the refiners of sugar, &c. and the latter, when dried, might be used for the food of animals, and even of man (!), or to some manufacturers. Most poultry will eat blood readily. A curious phenomena has been observed among the hens in some of the "chantiers:" the eggs which they lay have no shells. At present, the chief consumption of the fibrine of the blood (dried) is in the way of exportation, to the colonies, for manure. The tendons and hoofs are used for the preparation of glue, and in the manufacture of combs, &c. The horse-shoes are sold either as old iron, or to be again used as shoes; and the nails are collected together and sent into the provinces, where they are generally used "pour garnir les sabots" of the peasantry. The fat is collected into heaps, melted, and sold at a high price to the enamellers, manufacturers of pearls, and in general to all those who use the blowpipe in their work. The flame of a lamp, fed with horse-oil, gives a more steady flame, than with almost any other. This oil is also used in the manufacture of soap, for softening harness leather, and sometimes in the preparation of gas.

We have thus disposed of almost all the soft parts of the animal; and the reader may now enquire, what becomes of the bones. At one time they were used, in great quantities, in the *building of the walls (!)* in and around Paris, especially of such as surround the marshes and gardens. The bones were mixed up with moistened earth, which on drying was held together effectually. These walls were very common in the Faubourg Saint Marceau, and in the neighbourhood of the Temple, and the Barrier des Tourneaux—places near which the "chantiers d'equarrissage" have been usually situated. Many of the walls have of late years been destroyed, for the sake of the bones; but not a few are still standing.

The broad flat bones are used for coarse cutlery, and in the manufacture of toys; but the chief consumption of horse skeletons is by the manufacturers of ammonia, of animal charcoal, &c. When deprived of their gelatine, the bones are ground down and then sold for manure to the land.*

Having thus discussed the economical uses of the "chantiers," our au-

* Our author states, that in no district is there so large a consumption of bones for this purpose, as in Yorkshire. The quantity of bones sent to that county from London is quite enormous; amounting annually, it is said, to 33 millions of kilogrammes (a kilogramme is rather more than two pounds of avoirdupois weight).

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thor proceeds to examine into the health of the workmen, engaged in the disgusting occupations of these places. With his accustomed zeal he has accumulated a great number of facts, to prove that the men are quite as healthy, or even more so, than most others of the lower classes.

We are told of the "santé la plus florissante" of the men, the "santé brillante" and the "fecondité remarquable" of many of the women, and the "force et mine admirables" of the infants, who are sometimes cradled "dans l'interieur d'une carcasse, comme dans un berçeau!" The same holds true of the manufacturers of gut-strings, and of the tanners, and of their families: they are in general remarkably healthy. What is especially worthy of notice, is, that the men very seldom suffer any inconvenience from wounding themselves, while engaged in their operations. The wounds, it seems, heal quickly; and it is rare that any case of carbuncle or of the "pustula maligna" occurs. "We shall mention," says M. D. "only one other circumstance in reference to the health of the workmen in the 'chantiers;' and that is, the remarkable exemption from illness, which they enjoyed, during the destructive prevalence of the cholera in Paris. There were far fewer patients admitted into the hôpital St. Louis, which is situated in the district of the 'chantiers,' than into any other hospital in the metropolis."

We do not wish it to be supposed, that, by the statements which we have now been making, we approve of the abominable nuisance of these establishments; but still it is a duty, which we owe to the public, to conceal no well-ascertained facts; and certainly one of these is, that the cholera affected scarcely any of the workmen now alluded to.

But we must now leave the "chantiers d'equarrissage," and pass on to another subject, which our readers may think to be still more uninviting—the state of the "fosses d'aisance" in Paris. M. Duchatelet, however, animated by a most laudable zeal to improve the condition of every class of society in that gay city, devoted much of his time and of his attention to this subject. "He had not," says his biographer, "the repugnance which these places naturally excite; I had almost said that he liked them (je dirois presque qu'il les aimait)! An anecdote told of him gives proof of this. Being present at a gay fete in the Hôtel de Ville, he could not help saying to one of his friends, 'J'aime centfois mieux aller dans un egout que de venir à cette reunion: on ne me verra plus ici!' Under such guidance, we shall not hesitate to accompany him in his rambles.

The state of the "fosses d'aisance" in Paris is certainly one of the greatest reproaches to the metropolis, which is so boastfully called by its inhabitants "the centre and mart of civilisation and refinement."

Many of our readers are perhaps not aware that, with the exception of a few insulated public buildings, such as the Palace of the Tuileries, the Hôtel des Invalids, the Bicetre Hospital, and two or three others, no dwelling in Paris is provided with a water-closet on the English construction: (latrine à l'Anglaise.) The reason of this great defect is no doubt, because the public sewers of the place are not numerous, and most of them are very imperfectly constructed. There are only a few large ones, crossing the metropolis in different directions to carry off the water and filth in the kennels of the streets, and the fluid refuse of manufactories; but the houses themselves have no communication with these sewers by means of private drains. Hence the only means, of getting rid of all the accumulated foul water, is

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to throw it either into the street, (to be carried off by the kennel there,) or into the privies, there to collect, until they are cleared and cleaned out—which operation is usually done once or twice a year in the better classes of houses, and only once every two or three years in the filthier parts of the metropolis.

Those, who have been accustomed to reside in London, and in the larger provincial towns of England, are indeed surprised, and not a little offended, by the state of things in Paris. The "fosses d'aisance" of a private house or hotel are frequently disgusting beyond description to more senses than one; and the practice of resorting to those of a more public description happily does not well suit English notions of decorum. Every thing is so admirably *appointed* with us at home, that it is only when we leave this highly favored, (however heavily taxed,) country, that we are sensible of the many conveniences and comforts, which we are almost unconsciously enjoying.

Our author informs us, that the expense of emptying and cleaning the privies in Paris has of late years greatly increased, in consequence of the improvements which have been made in their original construction. Formerly they were nothing better than holes or pits, dug in the ground, and walled on the sides. The urine, therefore, and all other fluid refuse which was thrown down, gradually soaked into the soil, and the worthy people of Paris did not trouble themselves where it went, or what became of it. But now, and for some time past, the "fosses" are built all round, being paved on the floor, as well as walled on their sides. The *advantage* (?) of this improvement is, that there is a vast accumulation of fluid as well as of solid filth collected during several months, until the period of emptying and cleaning comes round. The horrible offensiveness of this operation we need not describe. The filth is carted away to the great metropolitan laystalls at Montfaucon and Bondy, and there piled up in vast heaps, to undergo certain changes of fermentation and desiccation, before it is sold as manure to the farmers, or until it is exported to the provinces or to the French West India islands.

All this appears to the English reader most incomprehensibly disgusting. But, "what," says our author, "is Paris to do with this enormous mass of ordure? The construction of our houses does not admit of its being carried away by the sewers; and, moreover, not only should our agriculture suffer from the want of a most profitable manure, if this were done, but the Parisians would be shocked also, were they to suppose that the waters of the Seine, (from which, until very recently, all the supply of the metropolis is derived,) were contaminated with the contents of the fosses."

Various expedients have been proposed at different times to obviate, as far as possible, the stench and loathsomeness of the closets. The nature of almost all these experiments has been, to endeavour first to separate the urine and other fluids from the solid contents, and then to remove the former either by pumping it off, or by withdrawing it in some other manner.

By far, however, the best method is that proposed by M. Cazenave in 1818, and which consists in the adoption of moveable closets. Strange to say, this method has never met with encouragement from the municipal authorities, although the advantages, not only in respect of superior cleanliness, but also of diminished expence, are very obvious. M. Duchatelet

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very properly says, that no privy, however well and compactly constructed, can prevent the oozing of the water through its floor and walls. If such be the case, there must necessarily be a permanent focus of foul exhalation in every dwelling; and when, says he, we consider the numerous other agents all tending to render the abodes of the poor unhealthy, can we be surprised that low putrid fevers are so prevalent in Paris? Besides this consideration, there are others which deserve to be noticed. It is well known that there are numerous wells in different parts of Paris, and that many of the inhabitants derive all their supply of water from these. Now not a few of them are situated in those very neighbourhoods, where the "fosses" are the worst constructed, and the least attended to. The urine, therefore, permeating the soil, must necessarily contaminate the springs, from which the wells are fed. If there was occasion for further argument, we might allude to the melancholy circumstance, that scarcely a season passes over, without some accident to the scavengers employed in the disgusting duties of their calling. If we take up the Annales d'Hygiene, almost every number contains some lamentable instance, or another, either of death from asphyxia to these men, or of the horrid crime of infanticide, where the child has been concealed in the privy. These accidents could not occur, if the system of moveable "fosses" was generally adopted.

But it is especially in reference to the benefit which agriculture might receive, that our author strongly recommends the adoption of these contrivances. "Not only," says he, "would none of the solid matter be lost, but the mass of it would be very notably increased. Putrefaction and fermentation cause a very considerable portion to be dissipated; and moreover we are quite certain that it is less rich as a manure in its stale, than in its recent state."

It will naturally occur to our readers to enquire, what does M. Duchatelet recommend to be done with the fluid contents of the "fosses." The common practice hitherto has been, to cart it away along with the fæces, in immense casks, to the laystalls at Montfauçon and Bondy—there to be employed in the manufactory of ammonia, &c. and the refuse to be afterwards carried off by the large sewers into the Seine. Before detailing his own proposal, our author enters upon a minute and circumstantial enquiry, whether the waters of the Seine would be contaminated, if all the urine of the metropolis was discharged directly into its channel. Objections have often been made, even by able men, to this plan; and the French government has allowed itself to be influenced by these objections, in many of their municipal regulations. But it appears to have been forgotten all the time, that the sewers disgorge their contents into the river, and that many of these, as that of Montfauçon and Amelot, communicate with it *above* Paris. Where is the difference, in point of salubrity, between the conveying of the urine and other offensive fluids directly into the Seine, and the removing of it first to one large depositary, before it is carried off into the river by the sewer in the neighbourhood? M. Duchatelet, however, not satisfied with giving this most satisfactory reply, proceeds to show that the dread of contaminating the waters of the Seine is utterly groundless. He appeals to an admirable report of M. M. Fourcroy and Hallé, who have clearly proved, that the relative proportion of the fluids discharged daily into the river, with the actual amount of its mass, is so small and inconsiderable, that they can have no

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appreciable effect in vitiating it for almost any purposes, domestic or economical.

He calculates that the annual quantity of matters from the "fosses d'aisance" in the metropolis amounts to about 103,000 cube metres. One fourth of this may be supposed to consist of fæculent contents; and the remaining three fourths, or 77,100 cube metres, to be fluid. We may therefore estimate the daily quantity at 211 cube metres.

Now the average volume of the water of the Seine, even in a dry season, may be taken at 30,710 times larger than this quantity—211 cube metres.

During the Winter and Spring months, and after any continued fall of rain, the preponderance is vastly more considerable. If we take the medium quantity of water in the Seine, as it passes through Paris, the flow may be estimated at 255 metres in the second;—a quantity, which exceeds that discharged into it from the sewers by at least a million times.

The conclusion from all these calculations is, that the fluid contents of the "fosses" might be discharged directly into the Seine, without any danger of contaminating its waters.

Having resolved this point, M. Duchatelet proceeds to enquire, what would be the most convenient and appropriate method of conveying these fluid contents to the river.

Our readers already know that this cannot be effected very easily in Paris by means of the sewers, in consequence of the want of private drains communicating with them. It is to be hoped that the Parisians will at length be convinced of the utility, or, we should rather say, the absolute necessity of these; and that the present method of carting away all the fluid as well as the solid contents of the "fosses" will be gradually abolished. Many a year however must pass over before this can be done; and until that fortunate time arrives, M. Duchatelet suggests that, if the moveable "fosses" were universally adopted, and emptied daily of their fluid contents, these might be advantageously got rid of, by discharging them into the kennels in the middle of the streets—at least in those places of the metropolis, where there is a sufficient supply of pure water to keep up a constant current along these kennels.

This proposal may, on first consideration, appear very objectionable; but our indefatigable author assures his readers, that he has quite satisfied himself that the addition to urine of from four to six times its quantity of water will deprive it of all its offensive smell. Since the opening of the Canal d'Ourcq (one of the great works of Paris recently completed, and one, by means of which every part may be abundantly supplied with water), there can be no scarcity of water; and the proposal therefore of M. Duchatelet, with the view of inducing every householder to become a subscriber to this great undertaking, is "qu'il sera dorenavant permis aux particuliers d'envoyer sur la voie publique les urines et les produits liquides des fosses d'aisance; mais seulement lorsque l'eau de l'Ourcq arrivera chez eux, et lorsque son ecoulement pourra se faire, sur cette voie publique, en assez grande abondance pour que ces matieres soient sans odeur fetide."

Before quitting the subject of the "fosses d'aisance" M. Duchatelet offers a few remarks, as to the best method of employing the solid contents. For the purpose of destroying their effluvia and of preventing their fermentation, he suggests that a quantity of animal charcoal, or, in lieu of this,

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which of late years has become very valuable and therefore very expensive, of calcined peat, or of the refuse of tan yards, &c. be mixed with the fæculent matters, before and after their removal from houses.

By the adoption of such simple means, much of the inconvenience and offensiveness of the present processes might be avoided; and the heaps of ordure accumulated in the laystalls, which in the present day are so disgusting, would be comparatively much less putrescent, and therefore better fitted for transportation as manure, either to the provinces, or to the colonies abroad.*

"In conclusion," says our author, "the changes now proposed in the construction and regulation of the "fosses d'aisance" are of such high importance, and the results, which might be obtained from their adoption, are so useful and so extensive, that they would suffice to distinguish and to recommend to the gratitude of future ages the names of those administrators, who may happily enforce them. This glory is reserved for the present two Prefects of the department of the Seine, and for the Municipal Council of Paris!!"

So much for the "fosses d'aisance of Paris. But before quitting the subject, it may be proper to allude to M. Duchatelet's 14th Memoir, which is entitled "Researches to Discover the Cause and the Nature of the Alarming Accidents, which occurred at Sea on board a Vessel loaded with *poudrette*." The vessel it seems sailed from Havre with a cargo of this most disgusting manure, and was bound for Guadaloupe. In the course of two or three weeks after leaving port, a scorbutic fever appeared among the crew. One half of them died, and the remainder, when they reached their destination, were miserably ill. Our author was appointed by the Marine to investigate into the particulars of the case, when the vessel returned to France.

It is not our intention to follow him through the details of the report, which he drew up on the occasion. Suffice it to say, that he came to the conclusion that the *poudrette* had been shipped, when it was too wet; that it ought to have been better dried; and he very properly suggests that a quantity of lime should be mixed with it, before it is taken on board any vessel. The effect of the lime is to absorb moisture and to counteract putrefaction and fermentation: besides it is well known to be a useful manure itself.

If we (the Rev.) were to give an opinion on the subject, we should say that no vessel should be allowed to carry such a putrid cargo—certainly not when bound to a tropical climate. Is it not strange that the fertile and luxuriant soil of the West Indies should require dung, as manure, from Europe?

The sixth memoir on the sewers of Paris, is the most elaborate one of the collection. The author very justly remarks, that the position of the French metropolis, lying as it does in a nearly horizontal valley, renders the necessity of a proper system of drainage the more imperative, while it adds greatly to the difficulty of effecting this most important object.

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* This sort of manure, to which the French give the name of "poudrette," seems to be an article of very considerable commercial importance in France.

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Much, he admits, has been done; that much remains to be accomplished, before Paris can be called a clean, or well appointed city. If there were a few more such zealous labourers as our author, the good work would be quickly advanced.

Multitudes are hourly traversing the streets of the gay metropolis, engaged in their business or their pleasure, without for one moment considering, or perhaps without being at all aware of, the fact, that they are passing over subterranean and therefore unseen, but most important and necessary structures, without which the existence of the health of the inhabitants would be speedily compromised, and the streets rendered almost impassable. They do not remember, that a number of their fellow citizens voluntarily condemn themselves to pass their lives in subterranean canals, exposed to all sorts of loathsome offensiveness, and doomed not unfrequently to perish while engaged in their revolting occupations. And yet, without the assistance of these men, a great part of Paris would become quite uninhabitable, and must necessarily relapse into the state of an unhealthy marsh; such as it was three or four centuries ago. It is well known that the site of the Louvre, of the Tuileries and its gardens, and of the Champs Elysées, was formerly a swampy morass. The ground is very low, and used to be generally overflowed by the river during the Winter.

M. Duchatelet commences his memoir by alluding to the cloacæ of ancient Rome, which are always viewed among the mightiest monuments of its greatness. Not satisfied with committing the superintendance of these important structures to the care of the first men of the state, the people of Rome invoked the protection and assistance of certain divinities to preserve them. They had their god, Sterquilinus, and their goddesses, Cloacina and Mephitina, under whose special patronage all the public cloacæ were believed to be.

Such was the consequence attached by the Romans to those great works. M. Duchatelet gives a very good and instructive account of them; and then proceeds to examine the state of the sewers in his own metropolis.—Certainly no one was better qualified than he to reprove and to instruct his countrymen on this subject. He had devoted, as we have already said, several years of his active life to the investigation of it. He had not only traversed every considerable sewer in Paris, and had conversed with all who knew any thing of them, from the highest member of the Academy, to the lowest of the workmen, but he had even repeatedly assisted the latter in their occupations.

"J'ai surmonté sans hesiter la repugnance et les dangers inseparables de pareilles recherches; j'y ai sacrifié mon temps, et mon argent, et ma peine; je ne puis dire les demarches que j'ai faites, les fatigues que j'ai eprouveés, et les contrarietés de toute espece qu'il m'a fallu endurer." Such was the discipline which our excellent author submitted to.

He first gives an historical sketch of the sewerage of Paris, from the earliest period down to the present time. The perusal of this sketch will well repay the readers, who may take any interest in the past and present state of the French metropolis, and more especially those who at the same time are fond of geological researches, respecting what has been called, by Cuvier and Brogniard, the basin of Paris; but it is impossible for us to do more than merely to allude to it.

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In another part of this article, we have explained in what manner the contents of the "fosses d'aisance," are got rid of. They are not discharged into the sewers, but are conveyed away to the great depositaries at Montfauçon and Bondy.

In this respect, the sewers of Paris are greatly inferior in point of utility, as well as of cleanliness, and general management, to those of ancient Rome, and of London and other British towns. Not only are their dimensions much smaller, but their course also is uneven and irregular, and hence the current through them is slow and apt to stagnate.

It is to these causes that we are to attribute the numerous accidents, which occur every year to the workmen employed in cleansing the sewers of Paris. Such casualties are never heard of in London; whereas in Paris they are very frequent.

The Parisian sewers, every now and then, become obstructed from the deposit and accumulation of their solid contents; a large quantity of carburetted and sulphuretted hydrogen gasses is evolved, and the workmen, who are exposed to the effluvia, are apt to be asphyxiated.

Another topic, which has given rise to repeated discussion among men of science, as well as among the municipal authorities of Paris, is the question, how far the waters of the Seine, from which almost the whole supply of the metropolis is derived, are apt to be contaminated by the discharged contents of the sewers.

Numerous experiments have been performed to ascertain, whether there is any appreciable difference in the water of the river above the city (say at the Bridge of Austerlitz), from that lower down (at the Bridge of Jena). The result of all these experiments has been, to shew that chemical analysis does not discover any difference. Hence it has been concluded, that the contents of the various sewers, as well as of the filthy streams, such as the Bievre, which flow into the Seine, are quite neutralized by the comparatively enormous mass of water in the river.

This may be the case, says our author, in Winter, and after heavy falls of rain; but during the Summer months, especially when the season has been very dry, he has himself repeatedly observed, that the water of the river has been foul and discoloured, even as low down as Sevres, from the foreign matters discharged into its channel where it flows through Paris. The left or South side of the river is always infected in a greater degree, and for a greater length of time, than the opposite side—owing to the contaminating stream of the Bievre, on the banks of which most of the offensive manufactories are situated. Perhaps, says he, at no part of its course, is the Seine so muddy and filthy, as where it passes under the Hôtel Dieu Hospital.

Here we must abruptly stop. Our readers, no doubt, would like a little more of M. Duchatelet's company. He has infected both them and ourselves with a portion of his own enthusiasm, and, for our own parts, we have almost doffed our critical dressing-gown, and, tucking up our sleeves and breeches, prepared to descend into the sewers and the *fosses* with a true hygienic fervor. But, alas! a mandate most imperious arrests us. That literary autocrat, the printer's devil, tells us that there is room for no more "copy." What can we do? Our only resource is to come to a full stop, and introduce what observations remain in another portion of the Journal.*

* See Foreign Periscope.

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Periscope;

OR,

CIRCUMSPECTIVE REVIEW.

" Ore trahit quodcunque potest, atque addit acervo."

Notices of some New Works.

A Practical Treatise on the principal Diseases of the Lungs, &c. By G. H. Weatherhead, M.D.

Dr. Weatherhead's great object in this little work is to attract more attention to the *particular tissues* affected in pulmonary diseases, than is usually given in this country. The volume, though small, is divided into ten chapters: viz. 1st, on catarrhal affections—2d, on phthisis—3d, on dry catarrh—4th, on the cough of measles—5th, on gouty cough—6th, on asthma—7th, on pleuritis—8th, on pulmonitis—9th, on hooping-cough—10th, on laryngitis. In all of these chapters Dr. W. introduces some peculiar opinions, especially of a theoretical nature—but often of a practical tendency. These, of course, are dispersed through much that is already well known to the profession, as elementary knowledge. To the French pathologists, and to some English physicians, (Carswell for example,) Dr. Weatherhead is much indebted, and candidly acknowledges the obligations. A work of this kind is not calculated for analysis; but as a specimen, not at all selected as a favourable one, we shall give the fifth chapter—a very short one—for the benefit of our readers.

"Of Gout in the Lungs; or Gouty Cough.

There are two forms under which gout not unfrequently appears in the lungs; the one of an acute character, the other of a chronic. The first begins with the ordinary symptoms of bronchitis, a violent, dry, and noisy cough, and slight febrile symptoms. After a time, the gout takes up its ordinary position by attacking the foot, the seizure, for the most part, coming on in the night. From the moment the disease makes its appearance in the regular form, the cough sensibly abates, and soon ceases altogether. Patients whose fits of gout are apt to return about the latter autumnal and during the winter months, are most liable to be thus affected; and with some it is so usually the harbinger of their periodical attack, that, adopting the wise maxim, '*Venienti occurrite morbo*,' they treat the disease in the lungs the same as if it were in its regular place—the foot.

A circumstance characteristic of this kind of cough is, that, while the patient remains in a warm room, the cough is little troublesome, and often will cease altogether for hours; but the slightest change of temperature, such as going into the passage, or up-stairs to a bedroom, is certain to bring on a violent fit of coughing. This excessive sensitiveness of the lungs to atmospherical variations is not peculiar, it is true, to gouty cough; but it possesses this particularity about it, that the degree of sensitiveness, and that of the inflammatory action, are not co-ordinately proportionate.

The other kind of gouty cough I spoke of, or the chronic, is confined in its attacks to those old and infirm subjects whose constitutions have been broken up by long-repeated aggressions of the

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disease. This form of gout does not fly to the extremities, but remains fixed in the lungs, while the paroxysm lasts. It is of a much more dangerous character than the first-mentioned species; and, assuming, as it is eventually apt to do, the pituitous character, it kills the patient in the ordinary manner of this disease—that is, by the destructive reaction of its own consequences—by the gradually increasing debility augmenting the quantity of phlegm, while the copious secretion of the latter reciprocally augments the debility: the air-cells becoming filled with mucus, which, from weakness, the lungs cannot expectorate, excludes the air inspired from coming in contact with the blood; till, at length, the phlegm accumulates in such quantity as to produce slow suffocation, and the vital powers become extinguished in consequence of a reacting series of destructive causes and effects.

With respect to the treatment of the first form of the disease, nothing so effectually relieves the pulmonary affection as colchicum. A demulcent mixture (24), containing colchicum and ipecacuan wines, may be taken during the day; and a full dose of colchicum, combined with some carbonate and sulphate of magnesia, at bed-time. This practice I have repeatedly seen, not merely relieve the lungs from the gout, but sometimes remove the paroxysm entirely.

Now, though the plan of treatment to be adopted, in chronic gouty cough, be somewhat similar, it is infinitely seldom so successful. We are to avail ourselves of the aid of colchicum in this form of the disease, also; but, as the expectoration rather requires to be checked than promoted, we must dismiss the ipecacuan, and substitute one of the preparations of morphia, or hyoscyamus, in its stead. The disease is to be solicited to the extremities by warm foot-baths, mustard poultices, and the like; and it is to be gently expelled from the chest by the employment of external derivatives. The regimen, which, in the first kind of gouty cough, requires to be somewhat severe, is in this, on the contrary, to be rather generous and sustaining. The body is to be warmly clad at all seasons of the year; and all the emunctories of the system kept in due activity, by regulating them by appropriate means, as they happen to require it."

The reader will find some novel and interesting views of *inflammation* in this volume, which views have been still farther developed by the author in a paper read at the Medico-Chirurgical Society at one of the late meetings.

(24) ℞. Vini Sem. Colch.
—— Ipecac. ää ℥j.
Mucil. Acac. ℥iiss.
Mist. Amygd. ℥v. M.
Capiat æger cochl. amp. duo quater in die.

PRACTICAL OBSERVATIONS ON NERVOUS AND SYMPATHETIC PALPITATION OF THE HEART. By JOHN CALTHROP WILLIAMS, M.D.

The design of this work is fully set forth in the title page, in which it is stated to be, the establishment of a diagnosis between palpitation of the heart, unattended by any appreciable change of structure, and that which is the result of organic disease. The author calls our attention to the extreme importance of every physician thoroughly understanding each symptom, which can assist him in determining what the actual state of the heart may be, in all cases of palpitation; and upon this point he has dwelt with much force and propriety. In strongly urging the necessity of this knowledge, Dr. Williams is not contending with an imaginary deficiency, on the part of his medical brethren, in their powers of diagnosis; especially when the symptoms pointed out by auscultation, are but imperfectly understood; and sufficient care and judgment are not exercised in combining such symptoms with those discovered by other means. We agree with Dr. W. in the justice of the following forcible remarks of Dr. Baillie: "There are indeed few pheno-

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mena which puzzle, perplex, and lead into error the inexperienced (and sometimes the experienced) practitioner so much as inordinate action of the heart. He sees, or thinks he sees, some terrible cause for this tumult in the central organ of the circulation, and frames his portentous diagnosis and prognosis accordingly. In the pride of his penetration he renders miserable for a time the friends,—and by his direful countenance damps the spirits of his patient. But ultimate recovery not seldom *disappoints* his fears, and the physician is *mortified* at his own success."

When Dr. Baillie wrote this, the stethoscope was not used: but, will any candid practitioner deny, that it is an accurate description of what is even now of daily occurrence; sometimes through ignorance of our art, and, sometimes, from the deficiency of the means of diagnosis, even by the most skilful? A question however arises, whether in such a case as that just detailed, where functional has been mistaken for organic disease of the heart, the patient's fears are always *disappointed*, or the physician *mortified by success*. May he not by his error, and consequent mis-application of remedies create, or, at least allow the creation of, the very disease, which previously existed only in his own imagination; and which, but for his error, might have been prevented? The author says:

"In *nervous or sympathetic* affections of the heart, that abnormal action denominated palpitation forms a very prominent, and often the only feature; and is frequently, by a careless observer, regarded as symptomatic of some serious organic or structural change being established, either in the coverings of the heart, its muscular texture, or in some of its valvular appurtenances. * * * * But it may be asked—does not disordered function, though in itself of trivial import, become in the course of time positive disease? Will it not merge into, or insidiously produce positive disease of vital organs, especially of that important organ the heart?" This opinion is confirmed "by the experience of Avenbrugger, Corvisart, Esquirol, Hope, Forbes, and other pathological writers." p. 6-7.

The transition of mere functional, into organic disease of the heart being established, we have an additional motive for learning every symptom, however slight, which may assist us in our diagnosis of these, often difficult, cases. If functional disease be mistaken for organic, in nine cases out of ten the treatment must be such as to keep up the deranged action of the heart; and a disease, at first slight and easily remediable, is converted into one which is incurable, and almost necessarily, though after the lapse of an uncertain period, fatal.

A conviction of the truth and importance of the foregoing observations, has induced us to give a diligent perusal to Dr. Williams's book; and we now recommend it with confidence to our readers, as a useful guide, in this most difficult part of medical practice, to those who are not well skilled in the diagnosis of diseases of the heart; and a work from which the most experienced and skilful may derive useful information.

The first part of the work is devoted to a description of the stethoscope, directions for using it, and an account of the natural and morbid phenomena arising from the heart's action. On all these points the author does not profess to give any new information; but he states what is known, clearly and concisely. As being closely and essentially connected with palpitation, when not arising from organic disease, "sympathy" has received considerable attention from Dr. W.; and this part of his subject he has treated with much judgment, avoiding what is vague and uncertain, in the various theoretical explanations of sympathetic connexions between different parts of the body; and confining himself to matters of fact; he has related shortly, but clearly, all that is actually known on this subject, which can be rendered serviceable in practice. We regret that we cannot give extracts from this part of the work, as the whole section is so connected, that any paragraph, taken by itself, would not do justice to the author.

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In the second part of the work we find described, with great accuracy and clearness, the constitution and temperament of those who are the most liable to be affected with nervous palpitations, as well as a careful enumeration of all those accidental circumstances which, independently of any constitutional tendency, may give rise to the same derangement. The author then proceeds to detail, with much minuteness, all those symptoms which occur in palpitation, as it arises in persons of full habit and robust constitution, but in whom there is some local affection with which the heart sympathises; in persons of a directly opposite temperament; in persons who have generally good health, but are of a highly nervous and excitable temperament; in chlorotic females; in females who have lately ceased to menstruate; in those who have some irritation of the spinal cord; and in those who have some organic disease of the heart. In each of these cases the whole train of symptoms is described; and the points in which they differ from each other, according as they arise from one or other of the above causes, are detailed with all the care which the importance of the subject demands.

A few extracts will shew how the author has treated this part of his subject. After stating that there are cases of *active nervous palpitation* of the heart, connected with a plethoric condition of the system, which, in their early stages, closely resemble hypertrophy, he says: "A stout, ruddy-faced, plethoric country girl, consulted me in consequence of the extreme inconvenience she experienced from the over action of her heart. It beat full and strong against her ribs, and with sufficient force sensibly to raise my head at each stroke, when the stethoscope was applied over the præcordial region, though this is not usually the case. To this constant state of inordinate action, were added occasional attacks of palpitation, so tumultuous as scarcely to admit of analysis." In this case the uterus appeared to have been in fault, as menstruation had not occurred for several periods, and all the symptoms disappeared on the proper administration of antiphlogistic remedies. The author proceeds thus: "Although at first sight a train of symptoms such as just enumerated, might suggest the possibility of hypertrophy, yet on examining the phenomena collectively, the two disorders can scarcely be confounded, and might be distinguished even if the hypertrophy were complicated with palpitations. In the organic disease, the impulse of the heart is hard, circumscribed, and heavy; it raises the head of the observer at each stroke. The sound, instead of being clear, is obscure, and, as it were, muffled. A careful examination with the stethoscope will generally detect some irregularity in the contractions of the various chambers of the heart, either in respect to order or force. Percussion over the præcordial region, in advanced stages, produces a dull sound, which is not met with when the dimensions of the organ are natural. In hypertrophy, when the palpitations are, pro tempore, suspended, the beat of the heart still remains more hard and circumscribed than it ought to be, and indeed the movements of the heart are not always of a nature to merit the name of palpitation; they are not necessarily more rapid than in health—the patient does not always perceive them himself—and when he does, although they may in reality be much more forcible than natural, he seldom complains of the sensation being a source of distress, unless when the capacity of the chest is diminished by pressure, position, or otherwise. He attaches no undue importance to his symptoms, he evinces no unnecessary alarm respecting them, and even in the advanced stages of the complaint, seems insensible to his danger." P. 69—71.

In speaking of what is called "*passive palpitation*," he says, "in this variety of disease, the pulsations of the heart are increased in velocity, but not in strength; though apparently they seem so, they are not in fact. In many instances they are so slight as scarcely to be perceptible to the observer; yet they are always felt sensibly by the patient himself. When the morbid sen-

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sibility of the system is very great, an impulse, even much below natural, may be so annoying as to create considerable distress." P. 73. "In nervous palpitations, some well marked constitutional symptoms characteristic of the temperament is generally observed; in females, hysteria, with a morbid susceptibility to ordinary impressions; in males, hypochondriasis, or melancholy tendency; in both, great fear on the part of the patient as to immediate danger of life. Indeed there are not many diseases which excite in the mind of the patient so much alarm." P. 84.

The author gives six cases illustrative of palpitation without organic disease, and remediable, produced by the following causes: unexpected melancholy intelligence; tight lacing and spare diet; misfortunes in business; dyspepsia; the irritation of tape worms; and checked uterine secretion. He then calls our attention to a species of palpitation occurring at the change of life in females; and remarks, that although this is generally connected, at that period, with a plethoric state of the system, it may arise from a condition directly the reverse. He also refers to a cause of palpitation independent of disease of the heart, which too often escapes notice—irritation of the spinal cord. Of this he gives the following case. "A young lady of delicate organization and susceptible system, had been ill more than two years, and the general, as well as pectoral symptoms, caused a belief she was consumptive. A careful examination by percussion and the stethoscope, induced a different opinion in my mind, and on drawing the fingers down the spinal column, a small lateral curvature was detected with considerable pain on pressure; *the pressure on the spine brought on pain in the chest, palpitations and cough.* Leeches, frictions, and fomentations to the spine, relieved the tumultuous movements of the heart more than any other remedies." At the end of a year, this patient, having removed to the country, and continued these remedies, was materially improved in health.—P. 104.

The observations upon the altered sounds of the heart in nervous palpitations, and the directions for distinguishing these from sounds almost similar, occurring in organic disease, are quite equal to the other parts of the work.

The author concludes by a few sensible and practical remarks upon the treatment of the various functional derangements he has described in the first part of the book.

THE HUNTERIAN ORATION, DELIVERED IN THE THEATRE OF THE ROYAL COLLEGE OF SURGEONS IN LONDON, ON THE 14TH FEBRUARY, 1837. By Sir BENJAMIN C. BRODIE, Bart. F.R.S. Serjeant Surgeon to the King, and Surgeon to Saint George's Hospital. Octavo, stitched, pp. 38. London, 1837.

The Hunterian Oration excited this year more than the ordinary share of curiosity and of attention, from the circumstance of the period of its delivery being selected, for the opening of what we may almost term the New College of Surgeons. The old building has been extended, altered, and improved, and the present temple of surgery is worthy of the profession, if not of the science.

There is a striking contrast between the Colleges of Physicians and of Surgeons. The mansion of the former, dark, dingy, and deserted, is a symbol of the fortunes of its masters. Obstinately resisting innovation, declaring by successive votes their adhesion to the past, the Fellows of that College have to all appearance sealed their corporate doom. No doubt there are many amongst them, of enlarged views, and of liberal feelings, who have struggled in vain against a prejudiced majority, and in vain endeavoured to secure the fortunes of their order. But that majority has unfortunately been too strong, and conservative in name, has proved destructive in reality.

The College of Surgeons have shewn much more willingness to march with public opinion, and reforms in its polity have been made with wisdom and ala-

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crity. It would be well, and no doubt it would also be consistent with the ultimate stability of the Institution, if some modifications could be introduced into the mode of electing the Council, and if the government of the College could be made more popular than it is at present.

It is impossible to refrain from remarking the results of the cry for Reform that has agitated the profession for the last few years. It has been a subject of complaint, that the officers of the Colleges were not elected by the commonalty, and that the profession at large had no voice in the selection of its dignitaries. This was the great ground of remonstrance—this was the wrong that was most bitterly complained of—this it was that Parliament was called upon to remedy. The Parliament did interfere—its committee laboriously collected evidence, and reported on it—the King's Government took up the matter—and what has been the consequence? A new faculty, formed on the principle of centralization, and under the thumb of the Minister—a Faculty more independent of the profession and of popular election, than the councils of the old colleges. Observe that we do not pronounce an opinion, we do not say that the system is good or bad, we merely state the fact. It is essentially a system of centralization, it is essentially *not* a popular one. The Secretary of State appoints the members of the Faculty—the profession have nothing to do with his election. Now a Secretary of State can know little or nothing of professional merit, and he must depend on others for the information he requires. An opportunity is afforded for private influence and for intrigue, which, while human nature continues what it is, will pretty certainly be seized.

But to revert to the College of Surgeons. Sir Benjamin informs us, that:

"The library at this time contains not less than 20,000 volumes, and includes the most valuable works in the various branches of medicine, and in general science. Besides being open in the early part of the day as formerly, it will be open on three evenings of the week; an arrangement, which will, as I conclude, be very convenient to those gentlemen who are much engaged in practice.

The walls of the former museum have been elevated, so as to admit of a second gallery; and an additional building having been erected for the purpose of receiving the pathological collection, there will now be an opportunity of displaying many things relating to natural history and comparative anatomy, which were not displayed before. Various osteological specimens which formerly reposed in boxes in the vaults of the College, have already emerged from their obscurity, forming an extensive series of skeletons, and the whole is rendered at the same time more interesting and more intelligible by the *catalogue raisonné* which is now advancing rapidly towards its completion.

The lectures illustrative of the museum, have hitherto been consigned to different members of the College, none of whom have found it convenient to retain the office of professor for more than three or four years; and who, being engaged in other laborious duties, were seldom able to do full justice to the task which they had undertaken. Those lectures will now be delivered by the junior conservator, Mr. Owen, whose zeal and talents are known to you all; and who, devoting himself entirely to anatomy and physiology, will prove, as I venture to predict, a more efficient professor than any of us, who have preceded him. Thus there will be established, by means of this great museum and the lectures, a school of what may be called 'the science of life,' such as has never existed in this metropolis before, and we may reasonably conclude that this will ultimately be productive of great practical results."

The theatre of the College has been re-built. It is much larger and more commodious than it was, but still it cannot be considered a very good one. This, we believe, the Council could not help. The building has its limits, and something was judiciously sacrificed for the museum and the library. It is only on particular occasions that the theatre will prove too small—on or-

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dinary ones, it will probably be too large.

Our space is limited, and we have little room for extracts from the interesting Oration which lies in print before us. It was received with great applause by a crowded audience, and not the slightest source of the cordial reception of the orator, was the good feeling that he displayed throughout. We will snatch a few passages, containing anecdotes of the illustrious dead.

Partnership of William Hunter and Cullen.

"A century has just elapsed since a young man, established as a medical practitioner in the then small town of Hamilton, in Scotland, received into his house another young man, not many years junior to himself, as a pupil, that he might instruct him, as far as his limited means gave him the opportunity of doing so, in the elements of medicine and surgery. After the lapse of three years, an intimate friendship having become established between the master and the pupil, it was agreed that they should enter into a partnership to practise in Hamilton as surgeons and apothecaries. For this purpose, however, it was thought necessary that the younger of these individuals should visit the medical schools, which had then been only lately established, in Edinburgh and London, so as to complete his education. Accordingly, we find him, at the end of another year, studying Anatomy in London under Dr. Douglas, a celebrated anatomist of that day, and filling, at the same time, the office of preceptor to Dr. Douglas's children. Here new schemes of life were offered to his ambition; and the result was, that he never returned to Hamilton. Not long afterwards his friend followed his example, seeking a wider field for the exercise of his talents, first in Glasgow, afterwards in Edinburgh.

Of these young men the one, and the elder, was William Cullen; and the other was William Hunter: and such was the humble origin of two of the most remarkable men who ever engaged in the pursuit of the medical profession."

William Hunter's Enthusiasm as an Anatomical Lecturer.

"It is natural for a man to delight in that occupation, in which he is conscious that he excels: and accordingly we find, that the delivery of his Lectures on Anatomy was William Hunter's favourite pursuit. At first, he found it convenient to teach anatomy, as affording him the means of subsistence; but he continued to do so, when the more lucrative pursuits of private practice had given him wealth beyond the most sanguine expectations of his early life. From this time, as I have been informed on good authority, he was accustomed to say, 'I wish to make no profit of my Lectures: I am quite satisfied if they pay their own expenses;' which, of course, included those of the anatomical department of his museum. The performance of his duties as a lecturer was terminated only by his death; and I have been informed that, when his last moments had arrived, his mind still reverted to that which he regarded as the most worthy occupation of his life, and that he said, 'I wish now that I had but strength to bear being carried into my theatre, that I might tell my pupils how much comfort and happiness I feel.'"

Private Habits of William Hunter.

"If we inquire into the private life of William Hunter, we find that he was never married; that his domestic establishment was on a very limited scale, and that his habits were of the most frugal kind. But let us not suppose that this was in any degree the result of avarice. He had no taste for those luxuries, or for that of display, for which wealth is usually exchanged; or, at all events, he had another object in view, which he prized more highly than these: and, in whatever related to this, he was liberal even to extravagance. I need scarcely say that I refer to his museum. I have already had occasion to mention that part of it which related to anatomy. It was collected for the purpose of illustrating his Lectures, and its chief value con-

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sisted in the preparations illustrative of the changes of the gravid uterus in those relating to diseased structure, and in the catalogue."

"But many present remember, as I do, that the anatomical department occupied only the gallery of the building in which the museum was placed. A most valuable and extensive library, and a costly collection of medals and minerals, filled the lower part of it, and served to demonstrate that the collector of these treasures could well estimate the value of other branches of knowledge, as well as those in the pursuit of which he was himself engaged. There was a collection of paintings also by the first masters, but deposited in other apartments. It is said, that the expense of forming the museum did not amount to less than 100,000*l.*, the whole of which was derived from the savings of a laboriously earned professional income."

Manuscript Notes of John Hunter.

"Although between forty and fifty years have elapsed since the death of John Hunter, there is one part of his labours in anatomy and physiology which has only lately become known to the public. He left behind him some manuscript notes, intended to be introductory to the study of the several departments of his museum. These are now being published in the catalogue; and they exhibit, in a remarkable degree, those powers of observation, of tracing resemblances and analogies, and of generalization, which belong to genius, and lay the foundation of discoveries. It cannot be doubted that an accomplished writer would readily convert these notes into essays, not less interesting and instructive, and certainly containing more original matter, than the introductory chapters which we read with so much delight in Cuvier's lectures."

John Hunter's Labours not duly known.

"He loved knowledge for its own sake. As I have already mentioned, he went on collecting his observations respecting the vascular system and inflammation, and yet had never published them, when he died at the age of sixty-five years. When I was formerly giving lectures as Professor of this College, I found in a drawer of the museum what appeared to be some pieces of dried sticks. Mr. Clift said that he did not know what they meant, but he was sure that they meant something, and therefore that he had preserved them. When I examined them, I found that they were the result of some interesting experiments in vegetable physiology. It appeared, from one of them, that he had made the first and most important of the experiments made many years afterwards by Mr. Andrew Knight, proving the descent of the sap through the vessels of the bark. Yet these specimens had no ostensible place in the museum; and they would have been swept away as rubbish but for the care of Mr. Clift. He solved the difficult problem of the circulation of the crustaceous animals, which others since his time, and Cuvier among the rest, have endeavoured to solve in vain. These things could not be displayed in preparations: the drawings representing them, with the explanatory notes appended to them, lay concealed in a cabinet; and I doubt whether more than half a dozen persons were acquainted with their existence, until I exhibited them in my Lectures, delivered in this College, in the year 1821."

We recommend the Oration to our readers. It will beguile a weary hour, and they will find Sir Benjamin a pleasant Cicerone, while they stroll among the tombs of some of our most celebrated predecessors.

COMPENDIUM OF LITHOTRIPSY, OR AN ACCOUNT OF REMOVAL OF THE STONE FROM THE BLADDER WITHOUT INCISION; ADAPTED FOR GENERAL COMPREHENSION, WITH A SERIES OF STATISTICAL TABLES AND NUMEROUS WOOD-CUTS REPRESENTING THE MOST IMPORTANT INSTRUMENTS AND IMPROVEMENTS UP TO THE PRESENT TIME. By HENRY BELL.

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NAYE, Esq. &c. &c. 8vo. pp. 215. Bailliere, London, 1837.

The object of this little work is a very laudable one—to diffuse amongst the Profession and the public an acquaintance with the process and the merits of lithotripsy.

It is difficult to reconcile two aims, which in some respects differ widely from each other—that of instructing the public and the Profession. A popular work must avoid details, and explain in a simple, yet forcible, and in some degree an exaggerated manner, the principles of what it professes to teach. But the Profession is necessarily acquainted with those principles, detects the exaggeration, and requires the details which would not be intelligible to the public.

We cannot reasonably expect M. Belinaye to conquer difficulties inherent in his subject, and from their nature almost insurmountable. He has not conquered them. If any thing has been established, it is the fact that lithotripsy *is* a painful operation. M. Belinaye, however, cannot be expected to proclaim this. He observes—

"Many patients do not express even the least sensation of pain during the percussion." 85.

"To show how readily the lithotrite acts upon, and removes a small stone, a case has fallen beneath our notice lately, where the patient after a minute's endurance of the instrument, felt so little sensation and its magic was so rapid, that his mind became possessed by an opinion, that the whole affair was a mere jugglery, of which he had been the dupe. The remembrance of his having been sounded by several surgeons previous to the operation—the sight of the detritus of stone that had passed from him—and his presence at another equally rapid operation on another individual, brought home to his mind conviction, and congratulation at having, without suffering, escaped the knife." 118.

Such passages as these, and we might select more, must be admitted by those who have seen much of the operation to give but an imperfect idea of what is actually suffered, in the majority of instances, by those who undergo the lithotriptic process.

A comparison is instituted between lithotomy and lithotripsy. We cannot be surprised if that comparison should be tinctured with an obvious leaning towards the latter process. It is an amiable feeling, and it is impossible to avoid respecting the inclination to overrate what promises the relief of human misery. But time, which determines most practical questions, is gradually and surely solving this. As usual, truth will probably be found to lie in the mean between the extremes of the two opposing parties. One thing is quite certain. Lithotripsy has secured for itself all cases of small stones in healthy adults. The great aim of the benefactor of his species must be, to impress upon the public the necessity of attending to the symptoms of calculus in its early stage, and of applying in the first instance for surgical advice. Lithotripsy has, in this point of view alone, conferred inestimable advantages upon society.

Not the least interesting part of the work, is the author's account of the successive improvements which have been effected in the lithotriptic instruments. They prove, what is indeed known, that no art springs at once into maturity and perfection. But it has been a subject of complaint, that M. Belinaye has rather devoted himself to the praise of Baron Heurteloup, than to a strictly impartial history of lithotripsy. We will not affect to deliver an opinion upon this point. To a person unacquainted with medicine, the impression would undoubtedly be given that Heurteloup was almost the only man who had effected any material improvements in the process. That may be so. But Civiale, Leroy, and many others may feel indisposed to confirm the partial award of friendship. That award has not been niggard. The following quotation will shew that Baron Heurteloup receives his due, and "the puny and snarling companions," and "mosquitoes," are treated with very little ceremony.

"As for ourselves, we have been moved both for the love of the art of lithotripsy itself, and by a sense of duty to

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Baron Heurteloup, to uphold his great share in its invention. Contrary to what has been the case with many other inventors, particularly in this branch of art, his process has been open to the study of every medical man —his operations performed in private practice before his brethren—in hospitals, before the whole world. And as if this were not enough, all men of respectability who have sought him in his privacy, have had opportunities of investigating every minutia—of putting questions—making captious objections to draw out information, &c. &c.—as we ourselves have done.

In this, therefore, we have had our personal share of obligation: we should be most happy to think that this day, by our poor efforts, we had repaid it—by contributing something to the fame and triumph of one, who, open to all fair objections of scientific and honourable men, has held on the even tenor of his way, silent amidst incessant attacks of mouth and pen dictated by ignorance, envy, and malice. Not unlike in this to the manner in which we see in nature, creatures of a nobler race and growth, move amidst the punier and snarling companions with which they are obliged to herd.

The misfortune is that you cannot deal as easily with the malignancy of petty enemies, as you do with underhand detractors. You quietly despise the latter until time awards justice; but the former, like musquitoes, with their skin-deep wounds and eternal buzzing, distract your attention and delay your progress."

We must again observe that we do not pretend to enter on this controversy. Indeed our attention has been chiefly directed to it by a letter which we have received from Mr. Costello, and which we think it only justice to that gentleman to publish. With this we take leave, for the present, of the subject.

To the Editor of the Medico-Chirurgical Review.

Sir,—Allow me to call your attention to a work on lithotrity, just published, under the name of Mr. Belinaye, in which the author highly extols his countryman, M. Heurteloup, on the score of *his* inventions. With this gentleman's sentiments of admiration, or the mode he has taken to make them known, I have nothing to do, but I must object in the strongest manner to the exercise of a liberality which would deprive me of the merit of certain inventions of the lithotritic apparatus, which belong to me, and which he, (perhaps through simple ignorance of facts—for I will not impute improper motives), attributes to his friend.

M. Belinaye gives the drawing of several instruments which he says exhibit a regular "system of Baconic Induction." I must suppose, that the author here means that every successive modification of the instrument has led M. Heurteloup to further improvement, and thus that every new device in this course of instrument-making had carried him, one step nearer to perfection; and as we learn that in these attempts, he must have made "a room-full of instruments," the plain inference is, that the links in this long concatenation, must be exceedingly numerous indeed. The point of perfection, or goal of all these labours, is at length attained, and within a very recent period—a few months perhaps, the art of lithotrity has been enriched, by the invention of two instruments—the one, a lithotrite without teeth—the other a spoon, or spoon-beaked instrument.

As M. Belinaye undertook the responsibility of historian, he ought to be aware, that these two instruments were invented, and presented by me to the profession in 1832; the whole series, from the imperfect model which I obtained from Weiss, to the perfect instrument which is now in general use both in France and England, amounting to four only. These instruments were exhibited at the Westminster Society—to the Grand Institute of France immediately after—and a drawing of the toothless instrument was published in the Lancet.

Much doubt has been expressed by surgeons of eminence as to the possibility of terminating an operation of lithotrity, and cases have been referred

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to, in which fragments have been left in the bladder. In a letter, signed, "The Shade of Le Dran," in the Lancet, a case of this kind forms the groundwork of a charge against lithotrity, to which I felt compelled to reply. I did there promise, by anticipation, to defend lithotrity from the charge which is applicable to defective instruments, and by no means to the process; and I now redeem that pledge.

I have always objected to instruments having large lateral incisive teeth —always maintained that instruments should be so constructed, that if, through want of skill or tact on the part of the surgeon, the attempt to perform the operation should prove fruitless, the patient should be left in no worse condition than he was before the attempt had been made—in a word, if the instrument could accomplish no good, it should do no harm. It was for these reasons that I invented my double slide break-stone, without teeth.

With an instrument armed with cutting teeth, it is not possible to terminate safely the treatment of a case. The fragments, when few and small, lie flat on the surface of the bladder; and when an instrument with teeth is employed to gather them up, there is the greatest risk of wounding and pinching the viscus. It was to obviate this danger, that I constructed the spoon-beaked instrument, which I have used constantly in clearing the bladder of fragments since 1833. In one case of lithotrity performed on Mr. Job, watchmaker, residing at Camden Town, it was indeed my chief resource, as the patient was affected with paralysis of the bladder and lower extremities. The fragments thus obtained, and now in possession of Mr. Job, fill a four-ounce vial.

M. Belinaye will, I am sure, excuse me for thus vindicating my claim to those instruments. They are now universally adopted to the exclusion of "roomfuls" of other modifications.— Indeed Dr. Labbatt of Paris, in his visit to this country two years ago, had the candour to assure me, "that without my instrument the practisers of lithotrity must have fallen back on Dr. Civiale's instruments." I am however happy to perceive, that my confrere, M. Heurteloup is a convert to opinions, and instruments, which I have not ceased to recommend for the last five years. I honestly believe, that much of the disgrace that has fallen on lithotrity is attributable to the defective construction and principles of the instruments that have hitherto been so extensively and injudiciously employed, but now that all parties are agreed as to the superior value of my instruments, I would fain believe, with M. Belinaye, that the same number of mishaps will not occur in the course of a century.

In conclusion, I have only to express a hope, if M. Belinaye should write again on this subject, that he will see the propriety of respecting the principle of "*suum cuique*."

I remain, Sir, your's, &c.

W. B. COSTELLO.

Recent Publications on Anatomy.

Several articles have this quarter so far exceeded the limits we had calculated on, that others must be postponed until the following number of this Journal. That is our apology for the mere mention we can now make of some recent works. They will receive a fuller notice in our next.

The Works upon anatomy that have appeared since our last have been:—

I. The *Second Part of Mr. Swan's Illustrations of the Nervous System*. The plates are equal (no slight praise) to their predecessors. They represent —the dorsal aspect of the brain and spinal cord of the cod—the sympathetic nerve of the skate—the dorsal aspect of its brain and spinal cord—the dorsal aspect of its nervous system—the brain and spinal cord of the turtle. Of the letter-press we shall hereafter speak at large. In the mean time we strongly recommend the work.

II. *Sketch of the Comparative Anatomy*

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of the Nervous System, with Remarks on its Development in the Human Embryo, &c. &c. By J. Anderson, M.E.S. &c. This is a succinct account of the nervous system, illustrated with drawings, and elucidated by diagrams. It too demands a fuller notice at our hands, and will receive it. We recommend it to our readers.

III. *The Anatomy of the Human Body, illustrated by a Series of Engravings. With Letter-press. By P.D. Handyside, M.D.* These are chiefly selected from Fyfe's Plates. It may be doubted whether they are equal to the sets now in process of publication by Bourgery, Quain, &c.

IV. *The late Fasciculi of Quain's Plates.* The subscribers have every reason to be satisfied with these. Their execution is improved, not degenerating. Let there be enough of them.

V. *On the Connexion of the Anterior Columns of the Spinal Cord with the Cerebellum. By Samuel Solly, Esq.* This has been noticed a few pages further on. Mr. Solly deserves great credit.

NOUVEAU SYSTÈME DE PHYSIOLOGIE VEGETALE ET DE BOTANIQUE, &c. Par F. V. RASPAIL.

This will be amply reviewed in our next Number. It is a very valuable work.

NEW PHARMACEUTICAL WORKS.

1. *The New Pharmacopœia* has made its appearance and has been duly worried by the chemists. It is a difficult matter to please these gentlemen. Save us from being concerned with them.

2. *Translation of the New Pharmacopœia by Mr. Phillips.* This appears to us to be a very good one. Mr. Phillips has been violently assaulted, but he has evinced much gentlemanly feeling and good humour.

3. *Translation of the New Pharmacopœia by Dr. Spillan.* There is room both for Mr. Phillips and Dr. Spillan. The latter gentleman, like all the *pharmaciens*, has come in for a little "raillery" in the Tony Lumpkin style. Yet his translation is a good one.

PRINCIPAL ORIGINAL PAPERS PUBLISHED IN THE WEEKLY AND MONTHLY BRITISH JOURNALS, BETWEEN THE 1st OF JANUARY, AND THE 20th OF MARCH, 1837.

We have no great love for catalogues. Knowledge we conceive to be essentially a substantial thing—practical knowledge certainly is so. A pedant is content to learn what others have done, *because* they have done it—what is said or written *because* it is written or said. To him it matters little whether the thing is good or bad. He does not seek or love it for its merit, but takes it as a pioneer takes a trull, because she is a trull.

A quarterly journal may be made a bibliographical record. Three hundred pages may contain an account of three hundred books and papers. But what an account? a copy of their titles—an ex cathedrâ opinion on their merits! Can such a plan give the substance of the works of value? The question answers itself—it is preposterous to suppose that either journal or plan can do any thing of the sort.

The mass of the profession we may reasonably suppose to be actuated with the wish to possess at a cheap price, what is really valuable in the current medical literature. The body of practitioners are not mere book collectors or idle virtuosi. They do not keep a ledger, in which to post that John-a-nokes has written a long paper on the adaptation of rhubarb and magnesia to children's bowels—or that Dr. Hopingarter has published a most elaborate thesis, on the best method of cutting one's toe-nails. The body of the profession have something else to do, and something better, than to waste their leisure on this abuse of learning, or on carefully collecting these cobwebs of the brain. They are

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Hard-handed men, who labour here in Athens—

and their time is too precious, let us add that their sense is too sound, to permit them to cram their literary craws with such indigestible pedantic pastry.

We are plain matter-of-fact folks, and looking at things in that point of view which regards their utility, we can see little benefit in filling our pages with a multitude of mere notices, which *cannot* be much more than abstracts of tables of contents. It is useless to give merely a sketch of a good book—and it is worse than useless to give a sketch of every bad one.

Our own opinion, we speak as utilitarians, is this:—*that* what is really desired in a periodical, is the publication in that cheap form which periodical literature only can afford, of what is real and sterling information—*that*, for this purpose, an analysis of a few good books and good papers, is preferable to a million notices of as many volumes—*that* to diffuse information amongst the mass of the profession, the necessities of that mass and its tastes should be consulted—*that* the object of a philosophical critic should be, to diminish those necessities, and to elevate that taste—*that* mere bibliography and transcendentalism are adapted to do neither—but *that* the inculcation of a purer love of facts, of a reasonable dread of theory, of a close and accurate observation, and of a spirit of exact generalization, is calculated to serve the best interests of medicine and of medical practitioners.

Such is our creed—such is the system we have acted on and shall act on. Let others think as they may and do as they think, we have yet seen no reason to depart from this line of action. We have often professed ourselves, we do so still, utilitarians—utilitarians not in a sordid but a philosophic sense—utilitarians, not merely deeming—

> ——— the value of a thing,
> To be whatever it will bring;

but looking on it to ascertain whether it is or is not calculated to increase that stock of substantial knowledge, which is so satisfactory in itself and in its consequences.

Consistently with this declaration of our sentiments, we put in a subordinate rank and place, our bibliographical notices. But though subordinate, we shall render them complete, and our readers will find at the termination of each quarter, a list of the works that have been published, and the original papers that have appeared during its course. One word upon the latter. We must exercise on their enumeration, some degree of despotism. In the weekly Journals there are many communications, which can hardly be called original papers. They are explanations, or nameless sorts of epistles, from that nameless class of persons, who appear under the *soubriquets* of verax, justitia, and so forth—designations frequently adopted on the lucus à non lucendo principle, because the writers display an utter contempt both for justice and truth. With this explanation, we proceed statistically.

I. Anatomy.

Medical Gazette.

On the height of the diaphragm; by Dr. Edwin Harrison.—Jan. 7.

Account of an anomalous distribution of the branches of the aorta; by Francis Hird, Esq.—Feb. 4.

2. Physiology.

Medical Gazette.

Observations on the second sound of the heart; by T. Watson, M.D.—Jan. 7.

On the causes of the pectoral resonance in percussion, with experiments; by T. Clendinning, M.D.—Jan. 7.

Is taste a special sensation? being an answer to Mr. Noble's late remarks; by Dr. B. Alcock.—Jan. 7.

On the prevalence of calculous disorders among seamen; by J. Johnson, M.D.—Jan. 7.

On the organic globule—a physiological memoir; by Dr. T. G. Hake.—Jan. 14.

On the functions of Meckel's ganglion and the glosso-pharyngeal nerve; by M. W. Hilles, Esq.—Jan. 14.

Third report of medical cases treated

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at St. George's Hospital; by R. Macleod, M.D.—Feb. 4.

Remarks on influenza; by Henry Bullock, Esq.—Feb. 4.

Influenza, as it has prevailed in the House of Correction; by H. Wakefield, Esq.—Feb. 4.

Discovery of ciliary motions in the cavities of the brain; by Parkinge.—March 11.

Lancet.

Case of precocity in the mammæ of an infant; by W. Howitt, Esq.—Jan. 7.

On the formation of new substances, or the transmutation of old ones, by vegetable, animal, and chemical processes; by Mr. James Inglis.—March 18.

3. MATERIA MEDICA, AND PRACTICE OF MEDICINE.

Dublin Journal.

On the hydriodate of potash as an emmenagogue, in a letter from Dr. Pinching.—Jan.

Researches on the symptoms and diagnosis of aneurismal and other tumors in the cavity of the thorax; by G. Greene, M.D.—Jan.

Contributions to practical medicine; by Dr. Piez.—Jan.

Observations on cerebral and spinal apoplexy, paralysis, and convulsions of new-born infants; by Evory Kennedy, M.D.—Jan.

Case of hydrophobia; by Richard Long, M.D.—Jan.

Medical Gazette.

On some prominent novelties in the new edition of the London Pharmacopœia; by T. Everitt, Esq.—Jan. 7.

On the efficacy of chlorine in scarlatina; by R. T. Taynton, Esq.—Jan. 28.

Reply to Mr. Everitt's remarks on the New Pharmacopœia; by R. Philips, Esq.—Feb. 4.

On certain errors of Laennec and others respecting the regions of the chest; by Edwin Harrison, M.D.—Feb. 18.

Notice of the influenza of January and February, 1837; by John Clendinning, M.D.—Feb. 18.

Notes on the influenza; by R. Macleod, M.D.—Feb. 18.

Remarks on the nature and treatment of rheumatism; by T. Hope, M.D. Feb. 25.

On the character of the prevailing influenza; by W. W. Morgan, Esq. Feb. 25.

On abscess of the liver; by R. H. Allnatt, Esq.—Feb. 25.

Influenza at the St. Marylebone Infirmary; by T. Clendinning, M.D.—Feb. 25.

Efficacy of the strychnos nux vomica in affections of the digestive organs; by T. Mellor, Esq.—March 4.

A few remarks on molloscum, with two cases of molloscum non-contagiosum; by W. Dick, Esq. March 4.

Erysipelas, its nature and appropriate treatment; by H. Bullock, Esq.—March 4.

Lancet.

Remarks on Mr. Everitt's criticism of the New London Pharmacopœia; by R. Philips, Esq.—Jan. 14.

Case of carcinome sanglante, with remarks on the nature and origin of the non-analogous productions. By H. A. Roberts, Esq.—Jan. 28.

Case of pericarditis, ending fatally, with remarks on the effects of bloodletting in disease of the heart; by John Fosbroke, M.D.—Feb. 4.

New Pharmacopœia. Further remarks by Mr. Philips.—Feb. 4.

Case of scalding of the glottis cured with calomel; by Geo. Fayrer, Esq.—Feb. 11.

Case of hydrophobia; by T. G. Davey, Esq.—Feb. 18.

Remarks on the influenza; by W. Wansborough, Esq.—Feb. 25.

New views on hectic fever; by C. W. Edwards, Esq.—Feb. 18.

On the external application of opium in bronchitis and croup; by W. Bow, M.D.—March 18.

4. SURGERY.

Dublin Journal.

A case of circumscribed false aneurism of the brachial artery, caused by puncture in bloodletting, and cured by

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operation; communicated by Thomas Wall, Esq.—Jan.

Medical Gazette.

Cases in operative surgery, with remarks; by F. C. Skey, Esq.—Jan. 7.

Cases of dislocation of the head of the femur; by T. Wormald, Esq.—Jan. 28.

Account of a new method of operating for hydrocele; by Benjamin Travers, Esq.—February 11.

Sequel of a case of extra-uterine pregnancy, in which a full-grown fœtus was removed by an operation fourteen months after conception, with remarks; by F. Hutchinson, Esq.—February 11.

New method of treating hydrocele—in reply to Mr. Travers; by D. Lewis, Esq.—February 18.

Treatment of hydrocele by puncture and absorption; by Robert Keate, Esq.—February 18.

On the treatment of hydrocele by iodine; by Charles Caswall, Esq.—March 4.

Lancet.

Successful treatment of hydrocele by acupuncturation; by D. Lewis, Esq.—Jan. 14.

Case of "hydrocephalus externus," treated by puncture of the head; by J. Jeffrey, Esq.—January 21

Case of severe injury to the thigh; by J. P. Oates, Esq.—January 21

Operations for the removal of abdominal tumors; by R. C. King, Esq.—January 21

Case of malignant disease of the testis in a child; by D. W. Brown, Esq.—January 28

Case of traumatic tetanus, successfully treated by oil of turpentine—Jan. 28

New mode of operating for strangulated hernia, to obviate the danger of wounding the hernial sac; by M. W. Hilles, Esq.—February 11

Case of empyema, the effusion finding vent externally; by T. W. Macnee, Esq.—February 11

Failure of acupuncturation in hydrocele—February 18

Case of hydrocele cured by acupuncture; by Dr. Hacket—February 25

Case of strangulated hernia, relieved without wounding the peritoneum; by H. Meyers, Esq.—February 25

Case of strangulated hernia, treated according to Mr. Key's practice of dividing the stricture externally to the hernial sac; by Mr. W. Howitt—March 4

On the treatment of simple exostosis by repeated blistering; by Mr. W. F. Denham—March 18

5. Pathology.

Dublin Journal.

Letter from Dr. Perry on typhus fever.—January

Pathological contributions, No. 1; by Alexander John Hannay.—January

Some remarks on epidemic typhus fever, which prevailed in the parish of Donoughmore, in March, April, and May, 1836; by T. Henderson Babington—January

Medical Gazette.

On the contagiousness of typhus fever, and on the elements of medicine; by Dr. R. Williams—January 7

Case of an extensive encysted hepatic abscess with hydatids; by R. H. Allnatt—February 4

A remarkable case of gangrene of the right lower extremity, supposed to originate in a diseased state of the heart; by William Clark, Esq.—February 11

A combination of pathological states concurring in the same individual—Hydatids and their origin; by Dr. T. Ogier Ward—March 4

Case of hyperencephalus monstrosity, conjoined with other monstrous formations; by Walter Dick, Esq.—March 11

Case of obstructed ureter, with ulceration of the kidney and abscess; by R. Allan, Esq.

Lancet.

Account of the influenza prevailing among horses, with remarks on its treatment; by Charles Clark, Esq.—January 17

Observations on idiopathic chronic arachnitis; the diseases of the serous membranes; and the diagnosis, termination, and treatment of idiopathic

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chronic arachnitis, with cases; by Mr. M. W. Hilles—March 4

Medical and Surgical Journal.

A succinct treatise on medical reform for Ireland; by W. Stoker, M.D.—January 7

Dr. Sander's contribution to the pathology of the heart—February 4

6. MIDWIFERY.

Dublin Journal.

Cases of placenta presentation; by W. Jamieson, M.D.—January

Medical Gazette.

Midwifery practice; placental presentation and expulsion; by E. Augustus Corey, Esq.—January 28

On placental presentation; by J. Collier, M.D.—March 4

7 MEDICAL JURISPRUDENCE.

Medical Gazette.

Reports of the medico-legal examination of the trunk of a human body lately found in the Edgeware-road; by G. F. Girdwood, Esq.—Jan. 7

Report of an examination of the head of a female found under mysterious circumstances, with remarks; by G. F. Girdwood, Esq.—January 14

Medico-legal report on the lower extremities of a human body, found under mysterious circumstances, with remarks; by G. F. Girdwood, Esq.—February 11

8. MISCELLANEOUS.

Medical Gazette.

The medical witnesses' act; its injurious tendency; by F. H. Ramsbotham, M.D.—January 7

On self-supporting dispensaries; in reply to Mr. Smith; by W. Eales, Esq.—January 7

Medical statistics—On the identity of the vie probable and the vie moyenne, as deduced from the English population returns—January 28

Royal Institution—Dr. Faraday on a new general law of matter—Jan. 28

Observations on the mode and the amount of clinical and other medical instruction at Paris; by Edwin Harrison, M.D.—February 4

Anomalous condition of assistant-surgeons in the navy, with an address to Sir W. Burnett—February 4

Observations on the comparative mortality of the rich and of the poor; by John Rickman, Esq.—February 18

Lancet.

Remarks impeaching the capacity of Mr. Finlaison as the author of the annuity tables; by T. K. Edmonds, Esq. B.A.—January 14

Note from Mr. Baxter on the position of the patient in the treatment of vesico-vaginal fistula—January 7

Defensive remarks on Mr. Liston's operations for the removal of the superior maxillary bone—February 4

Medical and Surgical Journal.

Letter from Mr. Phelan respecting the progress of reform, and of the medical commissioners—January 21

Sketches of the state of medical knowledge in Persia; by H. F. Clarke, Esq.—February 4

9. LECTURES.

Course of lectures on medical jurisprudence; by Professor A. T. Thomson, now being delivered at the University of London—*Lancet*

Course of lectures on the physiology of the nervous system; by M. Majendie, in 1836—*Lancet*

Clinical lecture on the pustular group of venereal eruptions; by Dr. Wallace—*Lancet*

Lectures on forensic medicine, delivered at the Aldersgate School of Medicine; by W. Cummin, M.D.—*Med. Gaz.*

Clinical lectures delivered at the Meath Hospital during 1836-7; by Professor Graves—*Medical Gazette*

Notes of lectures on physiology; by Dr. Fletcher—*Lon. Med. & Sur. Jour.*

Course of lectures on materia medica and therapeutics; by Dr. Sigmond—*Lancet*

Lectures on materia medica, or pharmacology and general therapeutics; by Jon. Pereira, Esq.—*Med. Gaz.*

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Spirit of the British and American Periodicals, and Notices of British Medical Literature.

Recent Researches in Anatomy.

1. Observations on the Thyroid Gland. By Mr. T. W. King.*

The thyroid gland is one of those structures, of which not only the use is unknown, but of which the mere anatomical structure is indifferently understood. Mr. King has investigated it with assiduity, if not success, and we shall present the results of his and of Sir Astley Cooper's inquiries. We shall condense the descriptions as much as we are able; but much compression cannot be usefully exerted on articles of this character.

A. *The Thyroid Gland made up of Lobes and Cells, containing a Fluid.*

"Many recent anatomists (says Mr. King) seem to have observed that the thyroid gland contains a fluid; a few have adverted to its lobular structure; and others to an opinion that its more minute organization is granular."

Mr. King has not quite done the "recent anatomists" justice. From aught that appears in the preceding passage, the reader might suppose that the cells of the thyroid gland had not been distinctly noticed, and that its fluid contents had not been pointed out. Yet the lobular arrangement, and the presence of fluid, are insisted on by Cloquet and transcribed by Quain, and Cruveilhier has particularly pointed out the cells.

"Cet organe (says Cruveilhier) présente tous les caractères anatomiques des glandes, et comme elles, il se sépare par la dissection en grains glanduleux; mais il y a entre ces grains glanduleux et ceux des glandes ordinaires cette différence, que, dans la glande thyroïde, les grains glanduleux communiquent les uns avec les autres, tandis qu'ils sont indépendans dans les glandes ordinaires. La communication des grains glanduleux entre eux est démontrée par les préparations suivantes. Si on pique la glande thyroïde à l'aide d'un tube à injection lymphatique rempli de mercure, on verra ce liquide se précipiter dans les cellules, qu'il distend, et au bout d'un certain temps tous les grains glanduleux sont injectés. Il est facile de s'assurer que le mercure n'est pas infiltré dans le tissu cellulaire, mais bien contenu dans le tissu même de la glande, au centre même des granulations. Le lobe droit ne communique pas avec le lobe gauche; mais toutes les granulations de chacun des lobes communiquent entre elles.

La glande thyroïde a donc une structure vésiculeuse: or nous avons vu que les grains glanduleux de toutes les glandes étaient spongieux et comme poreux, et que dans ces pores peuvent s'accumuler les produits de leur sécrétion.

La nature glanduleuse du corps thyroïde est encore démontrée:

1° Par l'humeur visqueuse, limpide, d'un œil jaunâtre dont il est pénétré chez quelques sujets, liqueur qu'on pourrait recueillir en assez grande quantité pour la soumettre à l'analyse:

2° Par la rétention de cette même matière dans un nombre plus ou moins considérable de vésicules, lorsque les orifices des communication de ces vésicules avec les vésicules voisines viennent à s'oblitérer."*

We do not quote these observations of Cruveilhier for the purpose of throwing cold water on what Mr. King has done, but, as he has volunteered an account of the information offered by other anatomists, it is only fair that that account should be correct. We now proceed to the description given by Mr. King, which he assures us, and we do not doubt him, is drawn from his own

* Guy's Hospital Reports, No. III.

* *Anatomie Descriptive. Par J. Cruveilhier. Tome Deuxième*, p. 689-90.

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dissections, and supported by his preparations. The gland should be selected at an early adult period, fully developed, but without much condensation of the membranes. The examination will be facilitated, if the part be rendered moderately firm by immersion in alkohol.

Cellular membrane invests the gland, and forms a capsule for it. This sends prolongations into the interior, dividing the gland into laminated lobules, rather irregular in size and form, but about equal in extent to the little-finger nail, somewhat lengthened perpendicularly, and attached, for the most part inferiorly, by one end or edge. These lobules are very little susceptible of subdivision, and no where admit of complete separation without injury to the glandular texture. These lobules are rather larger internally than externally, and they are superimposed upon each other in a more or less concentric order.

The lobules are ultimately composed of cells, spherical or many-sided in form, minute in size, closely aggregated, and *without* perceptible apertures of communication.

"The proper contents of these cells are a fluid, which exists in widely-different quantities; and the cells are more or less visible, in proportion to the quantity of their contents. It is rare, however, to find them quite devoid of the secretion. An incision into the gland may scarcely yield a drop, and the cells may be actually invisible; yet, on immersing the part in water, the latter appears to combine with the secretion, and the cells are seen to become expanded in consequence. The cells must, indeed, become microscopic objects when emptied of their peculiar fluid; but even when no vestige of them appears to the naked eye, a portion of the gland, subjected to the action of alcohol or heat, will yield a vast number of minute grains of the consolidated secretion, which, as well as the containing cells, present very beautiful appearances under the microscope.

The most careful examination leaves little room for the supposition that the fluid belongs to any other part than the cells. It is of course impossible to define the largest size to which the cells may attain in the healthy or physiological condition; but it cannot be doubted, that a distention which materially exceeds the dimensions of a small pin's head must be morbid."

Mr. King attributes the granular appearance of the gland, insisted on by many anatomical observers, to the vascularity, under particular circumstances, of the parietes of the cells, and to an inconsiderable quantity of fluid in them. The thickness of those parietes diminishes as the vascularity decreases, and when the cells become distended.

The investing membranes of the cells are rendered very thin by the action of alkohol, whilst the contained fluid is consolidated almost without diminution.

B. *Analysis of the Fluid—Vessels and Nerves of the Gland.*

The fluid of the thyroid gland is certainly peculiar. In colour, it approaches the serum of the blood. Collected on the point of a knife (after incising the gland), it appears like weak gum, and is almost devoid of the ropiness of white of egg. Its bulk diminishes little when the substance is dried: at the same time, it becomes hard, somewhat darker, and less translucent. The fluid put into common rectified spirit seems only to lose a little water: it becomes solid, but not opake, and decreases but slightly. The same effects result in the cells when the gland is boiled for a quarter of an hour, and no apparent solution occurs. These are highly characteristic phenomena; although the coagulation, without opacity, may possibly be found to depend on very slight peculiarities of composition. The fluid, when mixed with water, seems to assume a turbidity with most of the ordinary tests for albumen; and, without dilution, may sometimes be rendered opake by a very weak nitric acid, as if it were that an alkaline influence is thus neutralized. The proper distinguishing characters are—its originally feebly mucilaginous form, and its subsequent bulkiness or massiveness when dried into a solid; and, again, its complete coagulation, without opacity, in alcohol, or when boiled,

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although the firmness thus produced is greater than that which results when the pure white of egg is operated on."

The small quantity of the fluid that can be satisfactorily collected, precludes, perhaps, exact analysis. Mr. H. R. Brett has examined some, and the result of his investigations would seem to amount to little more than this:—That one hundred grains of the dried gland yield five grains of fixed saline matter and oxide of iron:—

Alkaline chloride (most probably common salt);
Alkaline sulphate (mere traces);
Alkaline phosphate;
Phosphate of lime;
Oxide of iron;
Free alkali (probably potass), traces only.

The arteries of the thyroid gland are well known to be large and numerous. It admits of being minutely injected, though, like other organs in which injection and secretion are only occasional, its ordinary state is comparatively pale and bloodless. It is more vascular in infancy than at a later period of existence.

The veins are numerous and very capacious. The larger possess valves, yet the vessels can be injected from trunk to branch.

The absorbent vessels are many, and, comparatively, of large size. They pass out from, and cover all parts of the surface of the gland; form some junctions; and proceed, for the most part, into neighbouring absorbent glands. They sometimes appear to possess a rather less delicate structure than other lymphatics. Their valves are numerous: three or four pairs may occasionally be counted in a tube that is scarcely more than a quarter of an inch in length.

"The most important novel fact concerning the thyroid gland is doubtless this, that its absorbent vessels carry its peculiar secretion to the great veins of the body.* And the most simple and satisfactory method of demonstrating this fact is, to expel the contents of a healthy gland, by repeated and gentle compressions, into the lymphatics of the surface, and then to coagulate the fluid in these vessels. In this process, the delicate little lymphatics are first seen leaving the substance of the gland, and uniting, upon its surface, into trunks: and these, by the coagulation of their contents,* are rendered solid cords, with a very slight diminution of their capacity."

The contents of neighbouring absorbent vessels possess a smaller quantity of fibrinous and albuminous matter than the thyroid secretion does, and the latter must, therefore, be diluted in its passage to the venous system. There are many absorbent glands round the thyroid, and a few, of small size, appear to belong to it. One or two of them are impressed upon the lateral margins of the great lobes, posteriorly; one is often placed above the isthmus, and another in the mesian notch of the scutiform cartilage: some range beneath the under edge of the gland, and upon the trachea; and the smallest of them are but a very little larger than a pin's head.

The thyroideal nerves are inconsiderable.

c. Relative Position of the Gland—its frequent Compression.

The situation of the gland on the trachea and side of the larynx, covered by the sterno-hyoid and thyroid muscles, points out the frequent muscular compression and kneading it must be subject to. In the ascent and descent of the larynx in the act of deglutition, the gland must be additionally pressed on, from its form, and the disposition of the space in which it lies.

* "This has been indirectly surmised by Morgagni and others."

* "Upon collecting a little drop from one of these distended lymphatic ducts, and applying the test of alcohol, the solidity of the matter has remained as when within the gland, but its translucence has been less marked. I cannot say, however, that the small absorbent glands have had no share in this effect."

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"There is a casual circumstance of deviation in the form of the thyroid gland, which may serve to strengthen the view of its alternating states of compression. It frequently happens that a slight flattened pillar of the gland ascends from the isthmus, on either side of the pomum Adami: it is seen, perhaps, rather more often on the left than the right side; and it rarely appears well formed on both.* It is invariably under the influence of the sterno-hyoid muscle: but it is now and then provided with its own muscle; which, descending from the os hyoides, covers the pillar, and is inserted about its base, near the isthmus; thus exerting an extra pressure upon the supplementary portion of gland."

D. *Uses of the Gland.*

Mr. King offers a sort of diagram of the various organs and tissues in the body, classified according to the character of the nutritive fluid they receive, and to that of the fluids and solids that they yield. The thyroid gland is placed in the same category as "bones, muscles, and appendages, coats of vessels, spleen, thyroid and thymus glands, and renal capsules." It might appear odd, that organs and textures so different from each other as the preceding, should admit of being packed into the same physiological basket; and we fear it must appear evident, that the uses of the thyroid gland are not materially elucidated by the classification. In fact, Mr. King offers us many conjectures, and hints at many possibilities, but he does, and that may be anticipated, little more. It would seem that the gland is chiefly destined for temporary, or rather occasional purposes, and its cellular structure and fluid secretion give a faint colour to the supposition, that it may constitute a sort of reservoir. Mr. King urges, and we would earnestly support his recommendation, a careful observation of the varying conditions of the gland, and an accurate investigation of both its natural and morbid states under different circumstances as regards the individual. He subjoins three cases, which really serve to shew so little, that we may dispense with any farther notice of them.

2. NOTES ON THE STRUCTURE OF THE THYROID GLAND. By Sir ASTLEY COOPER, Bart.

Sir Astley, between the years 1824 and 1830, made some inquiries into the structure of the thyroid gland. He then became aware of its cellular character, and of its fluid, a sample of which he sent to Mr. Babington, who pronounced it to be highly albuminous. Mr. King was not aware of what Sir Astley had made out, nor was Sir Astley, until the eleventh hour, acquainted with Mr. King's investigations. Thus, they tend to corroborate one another.

The most interesting portion of Sir Astley's communication relates to the comparative anatomy of the gland. We shall introduce what is stated on this subject both by Mr. King and by himself, in order that our readers may be put in possession of all that is precisely ascertained.

A *Thyroid Gland of the Cat.*

It contains a fluid, which is coagulated by the muriate of iron.

The structure of the thyroid gland is cellular.

In the rat, and the mole, a similar structure may be observed.—*Sir A. Cooper.*

* "The production of the supernumerary portion, or pyramidal appendix to the isthmus, is found in various forms. Sometimes, in the absence of an isthmus, there is a double ascending flattened column; or, the isthmus being more or less complete, the pyramids are also developed: in either case, one or the other pyramid may be absent; one or the other, or both, may be imperfect in fulness or length, and occasionally surmounted by a small isolated spot of the same glandular structure. The occasional presence of a slip of a thyro-hyoid muscle, which is actually inserted into the gland (to raise it), or into the summit of a pyramid, is likewise worthy of note, in connexion with the view of muscular influence."

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B. *Thyroid Gland of the Dog.*

"After the removal of the two thyroid glands of a large living dog, they were found to contain a fluid, which was transparent, and coagulable by sulphuric acid."

"One gland is found on each side of the trachea. On the surface are numerous and large absorbents. When these are injected, besides absorbents, taking the course of the superior thyroideal artery, there is one to be observed on each side, descending to the junction of the jugular and subclavian veins behind the sternum. In 1824, when I put a ligature on the jugular vein and cellular membrane around it, a large absorbent vessel for the thyroid gland appeared."—*Sir A. Cooper.*

In the dog and cat, says Mr. King, the arrangement seems to be that of a number of small grains, more or less cubical (or polyhedral), closely packed into a flattened ovoid mass.

C. *Thyroid Glands of the Sheep.*

In the sheep there are two thyroid glands, generally united by a small intermediate portion. They are composed of cells, which are full of fluid. Mercury thrown into the arteries passes upon the cells, but does not easily enter them, for they are very minute. The veins admit of a more copious injection; and appear to communicate freely on the surface of the cells, where they form a network. The cells do not communicate with each other.

Sir Astley injected the thyroid gland of a sheep, by the arteries, with quicksilver. The artery, after entering the gland, divided into very small branches, which opened into little cells.

When examined under a microscope, the gland appeared, divided by a network, into cells; but each of these latter consisted of a great number of smaller cells.

The fluid removed from the gland of a sheep appeared, under the microscope, to contain a number of minute globules. It crystallized, like other animal fluids. It dried into a solid cake, like glue; which was, to a considerable amount, soluble in hot water. It coagulated with alcohol and sulphuric acid.—*Sir A. Cooper.*

In the ox, the fluid has characters resembling those of the sheep.

D. *Thyroid Glands of the Horse.*

"The horse has a thyroid gland on each side of the trachea, and each one receives two very large arteries. The structure is distinctly celullar. It is easy to fill the arteries and veins with injection, and to corrode them. When mercury was extravasated on the surface of one of these glands, it was immediately received into the absorbent vessels, and two lymphatic glands became filled."*—*Sir A. Cooper.*

E. *Thyroid Gland of the Pig.*

In the pig, the thyroid gland is placed on the fore part of the trachea, just above the sternum. It is large; and composed, internally, of numerous cells, which appear to have no communication with each other. The cells are distended with a fluid, which the gland secretes abundantly, and which may be procured by cutting into various parts of the organ.

Mercury was extravasated into the thyroid gland of a sow, four hours after the death of the animal. A few cells became filled; but the lymphatics soon conveyed the injection to an absorbent gland on the front of the trachea.—*Sir A. Cooper.*

Mr. King observes:—

"The gland of the pig projects in front only of the trachea, almost within the chest, and is closely covered with muscles. In some primates, as in man, it spreads laterally, but retains a con-

* "Five years ago I completely succeeded in injecting the thyroideal absorbents of the horse with coloured gelatine. Several vessels, escaping from the interior of the gland, passed on to some adjoining lymphatic glands; and finally formed a vessel, by the side of the trachea, as large as a small quill, proceeding from the gland to the veins. This preparation I have now sent to the Museum of Guy's Hospital."

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siderable mesian isthmus. In the cat, the dog, the horse, and sheep, after birth (and mostly before), the isthmus fades into a mere film; but the lateral lobes are still subject to muscular compression, either upon an unyielding trachea, or the dilating œsophagus, which, in some instances, is so remarkable, as to constitute, perhaps, the greatest source of pressure.

In some creatures, the sterno-hyoid muscles seem to leave the surface of the trachea uncovered, in order to follow the glands towards the œsophagus: thus it is in the seal and porpoise. In others, again, the gland is inclined to surround the œsophagus posteriorly, so as to press between it and the vertebræ, as in the porcupine. The existence of a thyroid gland in birds has been doubted; yet in a region of goitre, the crows, as well as quadrupeds, are said to be subject to the disease. I find the bodies which seem to represent the thyroid in fowls to be placed within the chest, close on either side, against the distensible crop."

F. *Morbid Anatomy of the Thyroid Gland.*

The only observations of any moment offered on this head, are by Mr. King. He remarks:

"It is pretty obvious that nearly all the marked diseases of the thyroid gland consist in derangements of the natural cells; their partial or general atrophy; their dilatation, universally or in small numbers; the various alterations of the contents of the dilated cells, whether serous, bloody, or discoloured, albuminous, cartilaginous, bony, or puriform; the thickening, induration, or ossification of one or more of the cells subsequent to a morbid dilatation.—Other changes are less common. A general atrophy may be combined with more or less increase and induration of the cellular tissue of the gland, to which I have already adverted. I have also found the site of the gland occupied entirely by condensed cellular tissue, with the exception of two pea-sized portions of true gland situated on one side within this tissue. In this case, the peculiarities of the individual were fully sufficient to indicate the importance of the defective part."

Sir Astley promises to pursue the investigation in company with Mr. King. We wish them both the success that they deserve. It is no mean honour to the latter, to be associated with one who has done, and is doing, so much for minute anatomy as the worthy Baronet.

THE HISTORY OF AN UNUSUALLY FORMED PLACENTA, AND IMPERFECT FŒTUS, AND OF SIMILAR EXAMPLES OF MONSTROUS PRODUCTIONS. By Dr. HODGKIN. With an Account of the Structure of the Placenta and Fœtus. By Sir ASTLEY COOPER, Bart.

We will first lay an account of the imperfect fœtus examined by Sir Astley before our readers, and then notice some of the interesting remarks of Dr. Hodgkin.

The mother of the fœtus, Mrs. D. aged 28, was attended by Mr. Randall, of Finsbury Square. She became pregnant in the beginning of February 1832, and felt herself as well as usual under similar circumstances; till between the 4th and 5th month, when she began to complain of a pain a little below the hypochondriac region on the right side; which increased in severity till the period of parturition, so as to prevent her walking to any distance, and to disable her from sleeping in the recumbent posture for full three months previous to her confinement. To secure any rest, it was necessary to prop the back with pillows.

These distressing symptoms were accompanied by a profuse discharge from the vagina, of a brownish-coloured fluid, great emaciation of the whole body, and extreme tumefaction of the legs.

During the first five months of pregnancy, the appetite was very bad: after this period, it became ravenous. She went her full time, suffering considerably to the very last. At two o'clock of Thursday the 18th of October, she

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was delivered of a fine healthy female child.

Within a quarter of an hour of its birth, severe pains returned; and, upon examination, it was evident that something more than the placenta was left behind, although no perfect presentation could be made out.

After excessive pain, attended with considerable loss of blood, and consequent exhaustion, the monster, now in the possession of Sir Astley Cooper, was protruded, in the horizontal direction. The placenta was thrown off about the usual time, and the uterus contracted firmly. On the 20th, Mrs. D. had an attack of inflammation at the spot which had been affected during pregnancy, but under appropriate treatment, she recovered. The living child has been subsequently healthy, but the pulsations of the heart are strong and full, and vibratory. We now proceed to the results of Sir Astley's examination of the placenta and of the imperfect fœtus.

"The placenta was composed of a single mass; but it was divided by its membranes into two cavities of unequal magnitude, the larger of which had contained a well-formed, and the latter an imperfect fœtus.

The larger child was surrounded by the usual membranes; and the smaller, and imperfect, was enveloped in similar and distinct coverings; but the membranes of each proceeded from the single placenta, and formed two cavities, perfectly distinct from each other, although they were seated upon the same placenta."

In the funis of the perfect child there were as usual two umbilical arteries and one umbilical vein, which diffused themselves in the placenta in the usual manner. The umbilical vein was rather larger than natural.

"The imperfect fœtus was contained in a cavity formed by a portion of the same placenta as that which contained the perfect; and was inclosed in membranes which surrounded it, and separated it from the larger fœtus; as the membranes were interposed between the two children, and also enveloped them.

The cavity was much more than sufficiently large for the imperfect fœtus, and probably had contained liquor amnii; but the membranes having been broken, the fluid had escaped. The base of this cavity was produced by a portion of the placenta, which was destined to the connexion of the imperfect fœtus; whilst the larger portion of the same placenta was connected with the perfect fœtus.

The membranes which surrounded the imperfect fœtus arose from the margin of the smaller portion of the placenta, and from a line which crossed its surface between the two children; and from this same line sprung the membranes of the perfect fœtus, as well as from the margin of the larger portion of the placenta. Thus the septum, or separation between the two children, was formed by the combined membranes of each; there being separate membranes, but only one placenta for the two children.

Near the centre of the cavity which contained the imperfect fœtus, a funis arose from that portion of the placenta; so that there was a funis to each fœtus. This funis of the imperfect child contained only one umbilical artery, and an umbilical vein. The umbilical artery divided into three considerable branches upon the smaller portion of the placenta, to which it was distributed.

The umbilical vein was of large size, and it received branches of veins from the smaller portion of the placenta, which corresponded with the branches of the umbilical arteries.

But now the great peculiarity of the mode of support and circulation of the second or imperfect fœtus is to be found in the structure of its placenta, and, as will be seen, in the formation of the fœtus itself. A large branch of the umbilical vein of the perfect fœtus passed upon the surface of the placenta, directly to the funis of the imperfect child, and thus established a free venous communication between the two children; whilst the other branches of the vein ramified upon the surface of each placenta. The umbilical arteries also of the perfect fœtus sent forth two large branches, but of unequal magnitude, to

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the smaller portion of the placenta, as well as many branches to the larger part of it; and the two arteries which passed to the smaller placenta formed only a single umbilical artery in the funis of the imperfect child: so that there was an arterial anastomosis between the two children, and a free communication between them was thus established.

The umbilical vein of each fœtus entered its navel in the usual manner; and the two umbilical arteries of the perfect child, and the single artery of the other, emerged from each umbilicus, to pass to the placenta."

Structure of the Imperfect Fœtus.

It was composed of a body and one leg, with a rudiment of a second thigh.

Bones. They consisted of a part of the dorsal vertebræ and those of the loins; and of three ribs, half the pelvis, the os femoris, patella, tibia, fibula, and those of the foot, which had only four toes, all on the right side.

Muscles. Nothing peculiar in them.

Veins. "The umbilical vein entered the navel at the usual place, and divided into a superior and an inferior branch. The superior became further divided into two vessels; one passing directly into the spine, to form the sinus venosus; the other splitting into two branches, which supplied the skin of the upper part of the body. The inferior branch sent an iliac vein on the right side, which divided into external and internal; and the latter sent forth the obturator vein. The iliac vein also sent a branch to the spine and to the integuments. Passing under Poupart's ligament, it received the femoral: proceeding further, the saphena vein, and a large cutaneous branch from the outer part of the thigh and leg, entered it; and these were well injected, from the umbilical vein even to the foot; shewing the absence of valvular office. The injection had indeed, in various parts of the body, passed so minutely, as to have reached the extreme ramifications; and had thence returned into the small branches of the arteries, where it was clearly visible. A small iliac vein passed from the umbilicus to the rudiment of the left thigh."

Arteries. The umbilical artery entered the fœtus by the side of the vein, and passed directly to the aorta, which was formed by two large branches at the upper part of the spine, and descended upon it, to form the two iliac arteries, the external and the internal, on the right side; after which it formed the femoral, under Poupart's ligament, and sent forth the usual branches to the thigh, leg, and foot.

Nerves. The anterior crural and saphenus nerve existed. The obturator nerve took its usual course. The spinal cord was large at its commencement in the dorsal region, opposite the superior rib. It descended to the pelvis, and formed the rudiment of the sciatic of the left side, and the sciatic and peroneal of the right, which were of large size and perfect formation. A small portion of sympathetic nerve was seen, with two of its ganglia, on the spine.

Viscera. The only viscus consisted of two inches of intestine, which was supplied with blood from the umbilical artery, as it entered; and a vein running to it was injected from the umbilical. It terminated in blind extremities.

There are some points connected with the structure, and the physiology of this fœtus and its placenta, which are not unworthy of attention.

A. When twins are formed, two placentæ are produced, which are, generally, not completely in contact, but connected by the membranes, which slightly adhere to each other: sometimes, however, the placentæ join, but without any vascular connexion: but still, in the practice of midwifery, the funis is secured, by way of precaution, to prevent hæmorrhage, lest such might be the formation.

When there are three children at a birth, the placentæ are generally distinct. When there is a quadruple birth, the same appears to be the case. Mr. Crosse, of Norwich, has, in his collection, two specimens tending to prove this. In one, the four placentæ lie two and two, but there are four dis-

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tinct fœtal membranes, having the same attachment to each other as in an ordinary twin placenta, without any vascular communication. In the other specimen in Mr. Crosse's museum, the placentæ all lie contiguous. They are not injected, but as the membranes are applied to each other as in an ordinary twin case, with a separate cavity for each fœtus, the probability is that the placentæ have no vascular communication.

It must have been already noticed, that the imperfect fœtus, described by Sir Astley, had *not* a separate placenta. The same placenta was appropriated to the perfect fœtus, which lived, and to the imperfect one we have been examining. There was a funis to each fœtus, but the one funis freely communicated with the other, by means of a large umbilical artery and vein.

B. The imperfect fœtus had no heart. How, then, was its circulation effected? Are we to suppose its vessels endowed with contractility enough to maintain it?

The difficulty, as Sir Astley observes, is at once removed, by observing, that the imperfect child was a mere appendage to that which was perfect; that there was only one placenta, and the blood, which traversed its structure, was derived from the perfect fœtus, and returned to it again; that the imperfect fœtus received, through its own umbilical artery, from that of the perfect fœtus, the current, which, after entering the aorta, and thence circulating through the arteries and veins of the monster, was conveyed back again, by the umbilical vein of the imperfect, into that of the perfect fœtus; and that the heart of the developed child impelled the blood into the other, which was appended to it, in the same way as it caused that fluid to circulate through the vessels of one of its limbs.

When the heart of the perfect fœtus acted; the blood was not only forced into the arteries, but also into both portions of the placenta, and was thence returned by the umbilical vein, in the ordinary manner.

Sir Astley goes on to remark that another hypothesis is possible. We may conjecture that the blood went *to* the imperfect fœtus by the umbilical *vein*, whence it passed into the aorta, and returned *from* the fœtus by the umbilical arteries. But this is the least probable supposition, as it supplies no circulating force, and it is opposed by the facts—*that* the umbilical artery of the imperfect, was plainly a continuation of that of the perfect fœtus—and *that* the part of the placenta belonging to the former, was evidently supplied by the umbilical arteries of the latter.

We may now advert to some of Dr. Hodgkin's remarks, and glance at another dissection of an acephalous fœtus by Sir Astley. The point on which we are busying ourselves at present, is the mode of circulation in fœtuses without hearts.

In almost all the cases of acephalous fœtus, the birth has *not* been single. Three cases of single birth have been recorded. In one of the three, related by Valisneri, the heart was present. In the other two, reported by Sulsmann and Donneaud, the heart was wanting, but we are ignorant of the precise condition of the vascular system. Deducting then these cases, we have a large proportion of imperfect fœtuses, which belonged to twin conceptions, and in which, therefore, the circulation of the monster *may* have essentially depended on that of the sound child.

In one case only, out of many of this description, has the communication between the umbilical cords been made the subject of inquiry. That case was published by Dr. John Clark, in the Philosophical Transactions of 1793. The dissection was made by Sir Benjamin Brodie.

The monster was voided after the delivery of a healthy child: it was enclosed in a distinct bag of membranes, composed of decidua, chorion, and amnion; and had a placenta belonging to it, the side of which was attached to the placenta of the healthy child. Before the internal structure was examined, the navel-string of the perfect fœtus was injected, from whence the injection readily passed through both placentæ, viz. that of itself and that of the monster, and then into the substance of the

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monster also, as appeared by the redness of the skin. The monster is stated to have contained a small portion of small intestine, which, as well as the other parts, was well injected: no other viscus was discovered. The vessels of the funis soon became, by their subdivision, too minute to be traced. The only bones discovered were, the os innominatum, an os femoris, with a tibia and fibula; but no cranium, spine, or sacrum. The monster is also *said* to have had neither brain, spinal marrow, nor nerves. The small portion of intestine had a peritoneum; and was attached, by a mesentery, to the os innominatum, where this bone is usually joined to the sacrum. In the funis, there appeared to be only an artery and a vein, which took their course towards the inner surface of the os innominatum: they passed backwards towards that part where the articulation of the os sacrum is generally found; whence they proceeded to the other side of the bone, and were soon minutely subdivided.

Dr. Hodgkin has collected and relates the following particulars, in reference to the distribution of the vessels in some recorded cases of monsters.

"In the case which Poujol examined, and in which he found no arteries, the umbilical vein opened into the vena cava, a little below the kidneys: the vena cava ascended along the spine to the chest, where it divided into two main branches, which again minutely subdivided. In Méry's case, the umbilical vein furnished branches to the intestines. In Gourraigne's case, corresponding branches of the umbilical vein and arteries were distributed over the fœtus, which appeared to want the vena cava and aorta, as well as the heart. In Cooper's fœtus, the umbilical vein, on entering the abdomen, divided into an ascending and descending branch; whilst an artery, analogous to the aorta, continued along the spine, and gave off the umbilical arteries. In one of Meckel's fœtuses, there was a large umbilical vein, which sent branches to the kidney, the intestine, and lower extremities: there was no vena portæ. In the 4th example observed by Tiedemann, the vascular system consisted solely of a single umbilical artery and vein."

Sir Astley describes another imperfect fœtus—a twin.

The head, neck, and part of the thorax were represented by a large cutaneous pouch. The remainder consisted of an abdomen, pelvis, and two lower extremities. The child was a female, and the external organs of generation were perfect.

Vessels. The funis contained an umbilical artery and an umbilical vein. The latter divided into two branches—one formed the sinus venosus in the spinal canal, the other the renal, capsular, mesenteric and femoral veins, with their branches. There was an aorta which supplied the existing parts, much as usual. From its iliac branch, on the left side, proceeded the single umbilical artery, to which we have already alluded. There was no heart. The only communication of the aorta with the veins was by means of the extreme branches of each.

Nerves. These were well developed. There was a spinal cord, which began at the second dorsal vertebra. There were sciatic, peroneal, anterior crural, and obturator nerves. The great sympathetic was very distinct on the left side of the spine. It presented six ganglia, and sent some nerves to the aorta, in the usual course of the aortic plexus.

The viscera which existed were, a part of the intestinum ilium, the cæcum with its appendix, the colon, and the rectum, connected to the spine by a mesentery and mesocolon. But the parts which chiefly occupied the cavity of the abdomen were, the kidneys and capsulæ renales, which were of great size, in comparison with other parts.

In the pelvis, the bladder, the uterus, two distinct ovaria, and Fallopian tubes, and the rectum, were all complete; and in the bladder, the ureters, which were of large size, terminated as in a perfect fœtus.

We have thus given a correct account of the principal part of this lengthened paper. It is of no mean physiological interest, for the first dissection made by Sir Astley has established, what was

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previously mere surmise, that the heart of the perfect fœtus may form the great circulating organ of the imperfect one. The establishment of a fact is always of importance. Men will now direct their attention to the point, and we shall have more accurate observations than we have had.

On the Brain of the Negro, compared with that of the European and of the Ourang-Outang. By F. Tiedemann, M.D.

"It has long been the prevailing opinion among naturalists, that the negro race is inferior, both in organization and intellectual powers, to the European; and that, in all the points of difference, it exhibits an approach to the monkey tribes. The object of the present paper is to institute a rigid inquiry into the validity of this opinion. The author has, for this purpose, examined an immense number of brains of persons of different sexes, of various ages, and belonging to different varieties of the human race, both by ascertaining their exact weight, and also by accurate admeasurement of the capacity of the cavity of the cranium, and has arrived at the following conclusions:—

The weight of the brain of an adult male European varies from 3 lbs. 3 ozs. to 4 lbs. 11 ozs. troy weight—that of the female weighs, on an average, from four to eight ozs. less than that of the male. The brain usually attains its full dimensions at the age of 7 or 8; and decreases in size in old age. At the time of birth, the brain bears a larger proportion to the size of the body than at any subsequent period of life, being then as 1-6th of the whole weight —at 2 years of age, it is 1-14th—at 3, 1-18th—at 15, 1-24th; and in the adult period, that is, from the age of 20 to that of 70, it is generally within the limits of 1-35th and 1-45th. In the case of adults, however, this proportion is much regulated by the condition of the body as to corpulence; being, in thin persons, from 1-22d to 1-27th, and in fat persons, often only 1-50th, or even 1-100th of the total weight of the body. The brain has been found to be particularly large in some individuals possessed of extraordinary mental capacity. No perceptible difference exists, either in the average weight or the average size of the brain of the negro and of the European: and the nerves are not larger, relatively to the size of the brain, in the former than in the latter. In the external form of the brain of the negro, a very slight difference only can be traced from that of the European: but there is absolutely no difference whatsoever in its internal structure, nor does the negro brain exhibit any greater resemblance to that of the ourang-outang than the brain of the European, excepting, perhaps, in the more symmetrical disposition of its convolutions.

Many of the results which the author has thus deduced from his researches, are at variance with the received opinions relative to the presumed inferiority of the negro structure, both in the conformation and relative dimensions of the brain; and he ascribes the erroneous notions which have been hitherto entertained on these subjects chiefly to prejudice, created by the circumstance, that the facial angle in the negro is smaller than in the European, and consequently makes, in this respect, an approach to that of the ape, in which it is still farther diminished. The author denies that there is any innate difference in the intellectual faculties of these two varieties of the human species; and maintains that the apparent inferiority of the negro is altogether the result of the demoralizing influence of slavery, and of the long-continued oppression and cruelty which have been exercised towards this unhappy portion of mankind, by their more early civilized, and, consequently, more successful competitors for the dominion of the world."*

We have inserted the preceding extract from a paper by Tiedemann. It is contained in a report of papers read before the Royal Society, in 1836. If the observations of the celebrated au-

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* Athenæum, Dec. 31st, 1836.

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thor be correct, the negro will have been long and grossly calumniated, and he will be proved to possess as much brains, at all events, if not as much intellect, as his European master. It is singular, however, that the various modes adopted of measuring the cranium should have been attended with such inaccurate results. The "facial angle" of Camper, and the "occipital angle" of Daubenton, are well known to be in many respects fallacious; but the vertical section of the cranium and face, recommended and adopted by Cuvier, appears to offer a less exceptionable method of determining their respective dimensions.

If different parts of the encephalon have different intellectual functions, as it is most likely that they have, it is obvious that the mere gross weight of the *whole* brain is not conclusive in determining the relative intellectual capacities of the different races of mankind. And, whether there be really different intellectual organs or not, it is certain that many portions of the brain are concerned in giving origins to nerves, and in receiving or originating the sensitive and motor columns of the spinal marrow. Much of the encephalon is, in short, appropriated to the animal functions, which, if not independent of the intellectual, must be distinguished from them—another source of error, sticking to conclusions drawn from the weight of the entire mass.

Yet, with all these reservations and allowances, M. Tiedemann's observations will take most physiologists by surprise, and fairly deserve farther consideration.

RECENT INVESTIGATIONS INTO THE COMPOSITION OF THE BRAIN AND SPINAL CORD.

The subject which, of all others, engrosses the attention of the anatomists and physiologists of the day, is the nervous system. At this very moment, the most ingenious and the most industrious of the profession are exploring its history, its growth, its composition, and its functions, with singular earnestness—let us hope, with equal success. The present Number of this Journal is evidence of the intensity of interest displayed by the inquirers, and of the corresponding interest which, we feel assured, is entertained by the profession. Anxious to lend our assistance to the extension of knowledge, of so high and so important a character, we have devoted many pages to generalizing the facts which have been more or less completely elicited, and giving publicity to the laudable exertions of several of our countrymen.

We noticed in our last Number a work on the Nervous System, by Mr. Solly, Lecturer on Anatomy at St. Thomas's Hospital. We have not the pleasure of a personal acquaintance with that gentleman, but a perusal of his work has left a very favourable impression on our minds. It has shewn him in the light of a zealous anatomist, and of a man of a candid and liberal mind. We feel great satisfaction in laying before our readers the result of his dissection of the medulla oblongata.

It is, perhaps, hardly necessary to observe that the medulla oblongata is the bulbous upper extremity of the spinal marrow—that it displays in front the corpora pyramidalia, which decussate, more or less completely, in the anterior longitudinal groove which separates them—that, on the sides, are the corpora olivaria—and, posteriorly, are the posterior pyramids, or corpora restiformia.

If the fibres of these several bodies, themselves continuations of the several columns of the cord, be traced upwards, they are well known to expand into the cerebrum and cerebellum.

The anterior pyramids, passing through the pons, continued in the crura cerebri, traverse the corpora striata, and expand into the cerebral hemispheres. They are described, too, as traversing the thalami.

The corpora olivaria also penetrate the pons, the crura cerebri, the optic thalami, and are continued into the convolutions of the summit of the hemisphere, as well as into those of the posterior lobe. The corpora olivaria have

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also been observed to contribute their medullary investment to the tubercula quadrigemina, and to form the valve of Vieussens.

The corpora restiformia, constituting the inferior peduncles of the cerebellum, diverge into its lobes, and are supposed to be its only media of connexion with the cord.

The preceding are the generally-received opinions and descriptions, and we have given this summary sketch of them, in order that our readers may fully understand what Mr. Solly has done. His investigations relate to the destination of the anterior pyramids, and to their connexion with the cerebellum. His discoveries were communicated to the Royal Society in a paper, which was read in May, 1836, and Mr. Mayo and Mr. Owen, who were deputed by that Society to report on it, have admitted the accuracy of the facts that it contains. The preparations establishing the succeeding statements, are deposited in the museum of the College of Surgeons. Let us now listen to Mr. Solly.

The anterior pyramids communicate with the cerebellum by two sets of fibres—one superficial and one deep.

"The *superficial* may again be divided into two sets: the first cross the surface of the cord immediately below the corpus olivare, and may generally be seen without dissection; they are more distinct in the sheep, bullock, and horse than in man, in whom they form a very thin layer emanating from the corpora pyramidalia, and I have no doubt that they actually decussate with their fellows of the opposite side, forming, in fact, part of the apparatus of decussation, though I have not yet positively ascertained the fact.

The *second* of the superficial set of fibres take the same direction; only, instead of crossing the cord immediately below the corpus olivare, they run to the inner side of the corpus olivare, and then ascending to the cerebellum, they form the outer part of the corpus restiforme.

The *deep* set of fibres from the antero-lateral columns to the cerebellum, are the most posterior of the whole mass of fibres composing this portion of the spinal cord. They are separated from the posterior columns by the posterior fissure, from which the posterior roots of the spinal nerves emerge; this fissure they cross in their passage to the cerebellum, obliterating it entirely.

Thus it will be perceived that one portion of the antero-lateral columns—for there is yet another portion of these columns to be described—on reaching to within a small distance of the corpus olivare, splits into three sets of fibres, one, and the most anterior, of which passes through the pons Varolii, as will be described presently, and may be designated the *cerebral* fibres of the anterior columns; a second set, which may be entitled the *superficial cerebellar* fibres of the anterior columns, passing over the surface of the medulla oblongata are usually seen without dissection. Rolando describes the superficial cerebellar fibres of the anterior columns, those which are seen without dissection (the processus arciformes of Santorini), under the name of 'filamenti arciformi,' saying, 'I believe that I ought to give such a name to numerous filaments which are seen to issue from the transverse fibres of the annular protuberance precisely at the same spot where the anterior cords penetrate into its centre. The filamenti arciformi nevertheless descend and partly cover the abovementioned cords, expanding on the corpora olivaria, and extending even to the median fissure, by which they remain separated from each other. Such a disposition is constantly observable in quadrupeds, in which the said filaments are extremely distinct, although no mention has hitherto been made of them.' Rolando does not, however, trace them, as he might have done, to the cerebellum, instead of describing them as descending from the pons Varolii. The third or *deep cerebellar* fibres of the anterior columns, proceeding in company with those of the posterior columns, form about a fourth part of the whole diameter of the restiform bodies."*

* Solly on the Human Brain, &c. 12mo, 1836.

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The physiological inferences that hang on these facts shall be stated in Mr. Solly's own words :—

"The fibres just described as connecting the antero-lateral columns of the cord with the cerebellum are peculiarly interesting when viewed in relation to the functions of the cerebellum. For although it is true that its functions have not yet been clearly ascertained, the experiments of Flourens, Bouillaud, Magendie, and others, and the numerous cases on record in which disease of the cerebellum has been followed by paralysis, all tend to prove that the cerebellum is in some way or other connected with the regulation of muscular action, most probably, as before hinted at, that it has the power of combining the action of individual muscles so as to effect an harmonious result, such as is necessary to enable us to stand, walk, &c. Even Broussais in his lecture on Phrenology, published in the Lancet, July 30th, 1836, acknowledges that the cerebellum is an instrument connected in some degree with the combined action of the muscles, though merely in relation to the act of copulation. Their presence also proves the weakness of Mr. Walker's theory of the function of the posterior columns as derived from the supposed fact that the posterior columns alone are connected with the cerebellum.

The circumstance is also at variance with the opinions of M. Foville, who reasons that the cerebellum must be concerned in the phenomena of sensation because the posterior columns are alone connected with it; while Dr. Prichard in his treatise on Insanity and other disorders of the mind, p. 482, after speaking of Foville's doctrines and their foundation upon what he considers an established fact in anatomy, says with the usual caution of such a highly talented observer: 'In the present state of these researches it would be a rash attempt to draw inferences with any degree of confidence; but I may be allowed to remark that the general bearing of facts seems to direct towards the conclusion that the two great organs inclosed within the skulls of vertebrated animals belong respectively to the two principal functions of animal life, which are, first, sensation, conscious perception, and the physical phenomena related to intelligence; and secondly, those of voluntary motion. This however can only be considered as a probable opinion. Such it has long been thought by many physiologists; and though the grounds on which this conclusion rests appear to be more secure than they formerly were, the proof is still defective."

ANATOMICAL REMARKS ON HUNCHBACKS.*

Dr. Stern has published in Muller's Archiv. some remarks on the structure of hunchbacks, from which we abstract one or two particulars.

There is a sort of family likeness in all hunchbacks, arising from a similarity in complexion, and in form of head, as well as from a general care-worn and superannuated appearance of the face. The dimensions of the cranium and of the face are altered from their ordinary relation to each other—the former equalling in size that of a well grown adult, while the bones of the latter remain undeveloped and small, as in childhood. Hence, in their physiognomy we see the bizarre and unpleasing combination of old age, and wisdom, and childhood, and simplicity. In the form of the lower jaw, in the great size of the mouth, in the compressed flatness of the lips, and in the sharp elongated nose, we recognize a striking likeness between all hunchbacks.

The limbs are fashioned to serve a trunk of larger proportions than that to which they actually belong. Yet even here the growth is unnatural, for the different bones of the extremities do not bear their due ratio to each other. Thus the femur is somewhat shorter than it ought to be, while the bones of the foot are excessively large. Of all the bones, the humerus is proportionally the

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Dub. Jour. Sept. 1836.

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longest, and to this is owing the great comparative length of the upper extremities in persons thus deformed.

Morbid Anatomy of Typhus Fever in Paris, Geneva, Dublin, Glasgow, Liverpool, Manchester, and London. By Dr. Lombard, of Geneva.*

The following facts observed by Dr. Lombard, are calculated to give rise to useful reflection in the mind of the pathologist and of the practical physician.

In Paris and Geneva Dr. Lombard has either made or seen a great number of dissections of patients dead of typhus fever. In all of them, without exception, he has found enlargement of the aggregated follicular glands in the lower third of the ileum, attended with ulcerations of the mucous membrane. So constant is this post-mortem appearance on the Continent, that it is looked on as an essential element in fever.

With this experience, Dr. Lombard went to Glasgow. The fever cases there were similar, almost identical, in character, to those he had witnessed abroad. A patient died, and he entertained no doubt of discovering follicular disease. There was none.

When Dr. Lombard arrived in Dublin, he again had opportunities of examining the bodies of fever patients. He inspected two, but found no follicular disease. He was informed by the physicians of Glasgow, that such lesions occur in about one-third of the bodies examined after death. The Dublin physicians told him that the alterations are even less frequent in that city, particularly during the present epidemic, which has preserved nearly the same characters for the last eighteen months. In former epidemics those changes appear to have been more common.

In Liverpool, where there were many cases of fever, Dr. Lombard found them similar in character to those of Dublin. The morbid appearances were similar too. Serous effusion in the brain, meningitis, pneumonia, and occasionally some injection of the mucous coats of the intestines, and occasionally also ulcerations of the ileum and cæcum, varying in frequency with the different seasons, composed the catalogue.

In Manchester, the total number of typhous patients received into the fever hospital in the year did not exceed three hundred and thirty two, a proportion far inferior to that observed in Liverpool and Glasgow. Dr. Lombard was informed that it was by no means constant for intestinal ulcerations to be found in the bodies of the dead.

In Birmingham, the fever cases are not numerous, but Dr. Lombard learnt that ulcerations of the lower part of the ileum were invariably found.

In London, the annual number of admissions into the Fever Hospital has been diminishing for the last three years. In 1835 the number of typhus cases was 250. Serous effusion in the ventricles and other morbid appearances of the brain, are more frequently to be met with, than the abdominal complications which in the shape of ulceration are not to be found in more than one fourth of the cases, according to Dr. Tweedie's researches; and this proportion of ulcerations in the lower part of the ileum varies with different seasons, being much greater in Autumn than at any other period of the year. The continued fever of London is very different now from what it was some years since; it was then highly inflammatory, and local and general blood-letting could not then be neglected; while now the symptoms of depression and weakness have taken the lead, and so low is the present fever that wine, camphor, and spirit of Mindererus are to be given in almost every case.

Thus, we have seen that in Birmingham only are intestinal ulcerations said to be constant. Dr. Lombard proposes an ingenious hypothesis, to account for the discrepancy in the morbid anatomy of fever here and on the Continent. But it is too unsatisfactory to induce

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* Dublin Journ. Sept. 1836.

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us to go into it. On one point, however, we find it difficult to agree with Dr. Lombard; and that point is no trivial one. We are not sure that follicular enlargements or intestinal ulcerations *do* attend all typhous fevers abroad. In support of this observation we may refer to M. Andral himself, who classifies "ataxo-dynamic," or typhous fevers thus:—1. Those in which the follicles are altered; 2. Those in which there is simple inflammation of the gastro-intestinal mucous membrane; and, 3. Those in which *no* lesion of the digestive tube exists.

M. Louis, indeed, has chosen to restrict the term typhus, to cases of the first class. But it may be questioned whether this is not, even in France, an arbitrary nosological definition, rather than an accurate expression of the fact.

DR. C. J. B. WILLIAMS ON PERCUSSION.*

Dr. Williams, an ingenious man and a zealous cultivator of auscultation and percussion, has published some remarks upon the latter subject, which are not undeserving of attention. His objects are, first, to explain the cause of sound on percussing the walls of the thorax; secondly, to deduce from such an explanation, some useful rules of practice.

1. He concludes that the sound obtained upon percussion, depends not on the vibrations of the air within, but on those of the solids themselves. His reasons are four.

A. If the sound depended on the quantity of air contained in the thorax, its tone should be deepened by the increase of that quantity. But a full inspiration raises the tone of the sound upon percussion.

B. If the sound depended on the air within the chest, it should be changed by the closure of the glottis. But, cæteris paribus, it is not.

C. "The sonorous vibrations of air contained in cavities may be of two kinds. One depends on any impulse communicated to the mouth of the cavity, and resisted by the body of air within, acting in the manner of a bottle, or of a tube closed at one end. This requires that the cavity should communicate with the external air, which we have seen is not necessary to the pectoral sound. The second kind of sound produced in air-filled cavities, is that resulting from the successive reflections of any sonorous impulse from side to side of the cavity; which reflections becoming regular vibrations, constitute a sound of a determinate character. This constitutes the prolonged reverberations heard in empty casks, the tinkling echo of the interior of bottles, cups, &c., the phenomena of metallic tinkling and amphoric resonance heard in various smooth air-filled cavities of the animal body.* But this cannot constitute the sound of pectoral percussion; for in a cavity of the size of the chest, instead of being drum-like, it would be tinkling, as it actually is in pneumo-thorax. Further, the pulmonary tissue, as it prevents the transmission of the voice from the bronchi to the surface, except at points where these are quite superficial, so much more completely will it prevent the transmission and reflection of sonorous vibrations to-and-fro, across the whole interior of the chest."

D. The lung is really a sort of air-filled sponge—a tissue adapted to arrest the vibrations of the air.

For these reasons Dr. Williams is of opinion, and we coincide with him, that the sound on percussion is really due to the vibrations of the parietes, and is affected by their tension, as well

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* Med. Gaz. Jan. 21, 1837.

* "This tinkling resonance is interesting, as it gives rise to several instructive phenomena of auscultation. It may be illustrated by holding the mouth of an India-rubber bottle to the ear, and striking the side of the bottle: each stroke is attended, or rather followed, by a metallic clink.—See Pathology and Diagnosis of Diseases of the Chest, 3d edit. p. 115."

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as by the resistance offered to them, by surrounding or subjacent parts. Those parietes may be compared, not *quite* accurately it is true, to the parchment or the lateral walls of the drum, whilst the cavity of the chest and its content represent *its* interior. As the parietes of the thorax are not uniform in structure, consisting of bone or cartilage, with interspaces of membrane and of muscle, and irregular external paddings of muscle, fat, or mammary gland, it is obvious that their tension is unequal, and it is clear that an advantage must ensue from the use of the pleximeter, or of the finger of the percussor, either of which tends to correct, on the nonce, that inequality. This view of the sounds upon percussion appears to us so much more consonant with all we know, than the hypothesis that the sound depends on the actual vibrations of the pulmonary air itself, that we need not go farther into the argument. Occasionally, as in pneumo-thorax, that air *does* vibrate, and then another sort of sound ensues—the metallic tinkling. So says our friend Dr. Williams; but we think that this is dubious. In pure pneumo-thorax, we have not necessarily the metallic tinkling, but an unnatural and clear resonance. This is not surprising. The parietes of the thorax are in a state of tension, and the large quantity of air in the pleura, is highly favourable to their perfect vibration. And in this case, as in the drum, a double vibration and a double source of sound exists—the contained air *and* the containing wall vibrate. The metallic tinkling is usually the consequence of liquid and air in the pleural cavity. The slightest agitation of the liquid readily occasions the sound in question, though the latter *may* be independent of it.

2. We pass to the application of the preceding theoretical conclusions. The object is to percuss to the best effect.

The first precaution to be observed is, that the spot percussed shall be in such a state of tension that it may vibrate; and if this be not the natural condition of the part, a degree of pressure, with the finger or pleximeter, will give this condition to it. The percussion should, of course, be perpendicular to the surface, and corresponding points of the two sides of the chest should of course, also, be selected for comparison. The force of the stroke arrests the attention of Dr. Williams.

According to that force must be the extent of the vibration—according to the latter must the parts *in* the thorax be affected. Suppose a thin stratum of serum, between the surface of the lung and the thoracic wall. Gentle percussion would produce a dull sound, because the fluid would modify the weak vibration. But strong percussion, occasioning forcible vibrations, their sound would be affected not simply by the superficial fluid, but by the lung subjacent to it. We don't know that it is necessary to follow out this principle in detail—a principle which serves to explain some otherwise obscure facts relating to percussion.

We have had some small experience in auscultation and percussion, and a fair share of that experience is in private practice on the better classes of society. The science of percussion is one thing—what actual circumstances will permit is another. We have little hesitation in saying, that the nice diagnoses seen upon paper, will in general *not* be obtained from the persons of ladies and gentlemen. Here and there a case may occur, a case of much obscurity, where a very minute examination is permitted. But, in general, both tact and reason dictate a more superficial investigation, and when the general symptoms and the physical signs lead to a *general* conclusion, to an approximation to the exact truth, we must be usually content. Yet nothing is more true than that minute knowledge is requisite for the formation of an accurate general opinion. This results from a quick appreciation of small circumstances, and how can they be appreciated unless we are familiar with them? The necessary superficial character of the ordinary investigations in private practice, are a stimulus to industry, not a damper on it—an additional motive for exertion, not a premium upon indolence. If a man has to fight with only one hand, he ought to be able to fight well.

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RECENT RESEARCHES ON THE SENSE OF TASTE.

OBSERVATIONS ON THE FUNCTIONS OF MECKEL'S GANGLION, OF THE VIDIAN NERVE, OF THE PALATINE NERVES, OF THE GLOSSO-PHARYNGEAL, AND OF THE GUSTATORY.

1. *Experiments of Dr. Alcock on the Glosso-pharyngeal, the Gustatory, Meckel's Ganglion, and the Naso-palatine Nerves.**
2. *Remarks on Dr. Alcock's Experiments. By D. Noble, Esq.*†
3. *On the Functions of Meckel's Ganglion, and of the Glosso-Pharyngeal Nerve. By M. W. Hilles, Esq.*‡

We have lately had an opportunity of observing the contradictory nature of experiments. The mere experimenter may sometimes wilfully deceive, will constantly be liable to self-deception. Unless experiments are superintended, if not directed, by reasoning, they will frequently lead to the grossest fallacies, and seldom conduce to the establishment of truth.

The tongue is the organ of taste. Every body is aware that taste is most perfect in the anterior portion of that organ. If you wish to appreciate the sapid qualities of objects, you apply to them the tip of the tongue—if you wish to avoid tasting them, you thrust them far back. Who does not know that a colocynth pill, if placed on the back of the dorsum of the tongue, may be swallowed without the swallower learning its bitterness?

But taste is probably not a simple sense—at least what is generally called taste is not. It is partly made up of touch, partly of smell, and partly of an appreciation of the qualities of bodies, which resides in the palate, in the nares, and perhaps the pharynx. If the nose is held when a black draught is gulped, some of its nastiness is lost. We do not *taste* that portion of its flavor, which resides in its odour, or, possibly, in other qualities.

The back of the tongue and the fauces are deficient in the pure sense of taste.* That seems certain. But they have a sense which the anterior portion of the tongue has not—an exquisite sensibility, which, on the contact of a foreign body, instantly draws on a convulsive action of the muscles engaged in the act of deglutition, and especially those of the palate and the pharynx. If, in looking into the mouth, the spatula be placed a little too far back, we see repeated gulps, in other words successive series of contractions of the levators of the palate and the pharynx, of the constrictors of the latter, and of the elevating muscles of the larynx. All this from a touch of the mucous membrane, the light touch of a feather, or the heavy one of a spatula.

When we investigate the anatomy of these parts, we find,

1. *That* the anterior portion of the tongue, which enjoys taste *and* perfect touch, is similar in structure to those portions of skin in which the latter sense is most developed. A highly vascular cutis, is crowded with papillæ, themselves highly vascular, and gifted with the power of erection.

2. *That* the mucous membrane of the dorsum of the tongue, of the soft palate, and pharynx, no longer displays the same character of papillæ, but has numerous mucous follicles and glandules.

3. *That* a nerve, the hypoglossal, is distributed to the muscles of the tongue, and forms with the "gustatory," a plexus, by which those muscles are supplied.

4. *That*, the "gustatory," a division of a nerve proved to be sensitive, the

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* Med. Gaz. Nov. 26, 1836.
† Med. Gaz. Dec. 17, 1836.
‡ Med. Gaz. Jan. 14, 1837.

* We do not mean that they are absolutely incapable of taste, but simply that it is not so perfect as in the tongue. The exact proportions of the sense possessed by different parts of the mouth and fauces, are not ascertained. Probably, they vary much in different animals, and experiments on one species are not conclusive with regard to others.

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fifth, is lost in that part of the tongue where taste and touch in perfection reside, its anterior and papillary portion.

5. *That* another nerve, the glosso-pharyngeal, supplies the mucous membrane of the base of the tongue, *and* the muscles of the pharynx.

6. *That* other nerves, the palatine, and naso-palatine branches of the fifth, and connected with the ganglion of Meckel, supply the mucous membrane of the hard and soft palate.

If anatomy tells us any thing, if reasoning is not utterly fallacious, both conspire to shew—

1. *That*, as the gustatory supplies that portion of the tongue where taste is in its perfection, it must be *the* nerve of taste.

2. *That*, as the hypoglossal supplies the muscles of the tongue; it must be *the* motor nerve; and as the motions of the tongue are subservient to taste, or are regulated by it and touch, so the motor nerve and the sensitive one form, as usual, a plexus.

3. *That*, as the glosso-pharyngeal, supplies the mucous membrane, where a special sensibility resides, and the muscles of a tube which that sensibility remarkably affects and governs, it must be *the* nerve, which gives the endowments of sensation and of motion, which makes the base of the tongue feel as it does feel, and the pharynx contract as it does contract, in accordance with that feeling.

4. *That* if any sense analogous to taste, and probably there is such, does reside at the basis of the tongue, the glosso-pharyngeal will confer it.

The structure of the tongue so similar to that of the skin, the character of its nerves, the gustatory and glosso-pharyngeal, both so analogous to nerves of sensation (the latter being one of motion too)—contribute to confirm, what has always been more or less believed, that touch and taste are not separated by a very bold partition, and that the basis of the tongue may without difficulty be supposed to possess a tertium quid, a less perfect degree of those senses, both of taste and touch, which reside in the anterior portion of the organ.

When M. Panizza contended that the glosso-pharyngeal was *the* nerve of taste, we could do no more than shrug our shoulders, and wonder how a physiologist could believe that a nerve enjoyed, par excellence, a faculty, which did not, par excellence, reside where that nerve was. This was the obvious objection of reason, and events have proved how little in this case, as in many others, experiment is to be trusted, when plain reason is against it.

We shall now present a brief, but a sufficient account of Dr. Alcock's experiments, and of Mr. Hilles' suggestions.

A. *Division of the Gustatory Nerves in the Dog.*

After the section of these nerves, the animal lost the tactile sensibility of the tongue, and retained the sense of taste; but, though it tasted, it appeared evidently to be by other parts of the mouth, and it seemed equally plain that it had lost the sense in the anterior part of the tongue, at least; for after it had been trained to suffer its mouth to be opened, quietly, and to have something laid upon its tongue, it allowed the pure coloquintida, moistened, to remain so long upon that part of it, care being taken to confine it to it, that no doubt could remain that the animal did not taste by the organ at its anterior part; but as soon as it was let go and closed its mouth, it displayed at once its sense of the taste by the ordinary indications.

B. *Division of the Glosso-pharyngeal Nerves.*

This is difficult, and may be deceptive. The experimenter should dissect animals beforehand to know how to proceed—and he should dissect them afterwards, to be sure that he has proceeded right.

Dr. Alcock divided both glosso-pharyngeals in several dogs, with the following results: in two of them, each time that either nerve was taken upon a hook, preparatory to its division, a most violent action of the pharyngeal muscles was excited, resembling precisely the pharyngeal effort to reject the matter, which most persons must have experienced, when something nauseous

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or revolting has got beyond the power of the tongue, and entered the pharynx; and it was so imperative, that the animal struggled to get upon its feet, and was with difficulty restrained. In a third, a similar effect, only less marked in degree, was produced, by pulling upon the nerve with a ligature passed underneath it; and in one of the three, the root of the tongue was at the same time depressed, and rendered concave from side to side. In three of the animals, muscular startings occurred in the throat, while the nerve was held upon the hook; but the phenomenon just described did not, at that time, take place. In one of those the startings were strong and repeated; in the others, though obvious, they were less remarkable; and in one also, as has been mentioned, the first effect described was caused by pulling upon the nerve. In all but one, the animal displayed much suffering from stretching, pinching, and division of the nerve. In every instance deglutition was more or less impaired. In some cases deglutition was impossible. But under certain circumstances small moist morsels could be swallowed.

Taste did not appear to be much affected. The animal rejected food embittered with coloquintida, though it *appeared* to manifest less aversion than formerly. When the artificial circumstances under which animals are kept after operations is considered—this faint expression of doubt, induces us to think that taste was but little impaired.

C. *Division of the Branches of the Spheno-Palatine Ganglion.*

One of the branches of this ganglion is the vidian—other branches are distributed to the soft and hard palate, the tonsils, the gums, and Schneider's membrane.

Dr. Alcock has twice extirpated the ganglion from both sides in the dog. In both instances the animal tasted acutely.

In birds, who taste keenly, there is neither ganglion nor corda tympani discoverable.

D. *Division of the Gustatory and Palatine Nerves.*

The dog was favourable for this experiment, as an interval of some lines exists between the origin of the naso-palatine nerve, and the attachment to it of the extremity of the ganglion.

"I performed the experiment in two modes: in two dogs I simply cut the lingual branches below the jaw, and the palatines at the interval described, by which proceeding the influence of the ganglion over the latter was not interrupted; and in two others, at the same time that I cut the palatines, I also removed the ganglion; and in both cases the result was *quam proxime* the same, viz. that taste was very nearly obliterated, though sufficient evidence of its presence was still manifested to compel me to admit its existence. The effect produced was, that the animals, which had previously displayed the usual disgust at the coloquintida, no longer manifested any, but only ceased to eat food embittered with it: they would eat several bits in succession, and then refuse to take more, or drop the bit, taken, from the mouth, and take presently a clean bit if offered to them."

It must be well known to many of our readers that the naso-palatine nerve, is looked on by some as a branch of Meckel's ganglion, while others regard it, and the other nerves commonly considered branches of that ganglion, as really twigs of the superior maxillary division of the fifth, on which the ganglion, if it really *is* a ganglion, is placed.* Be that as it may, Dr. Alcock's experiments would appear not to be complete. He has divided the glosso-pharyngeals only—the linguals only—removed Meckel's ganglia only—and divided the linguals *and* the naso-palatine nerves between their origin and Meckel's ganglion. To render the deductions unexceptionable, he should have divided the latter nerves, the naso-palatine, per se. He would then have ascertained more exactly what such division would do.

The following are the conclusions drawn by Dr. Alcock:—

"In conclusion, I feel justified in

* Vide Swan, Cloquet, Arnold, and Cruveilhier passim.—*Eds.*

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drawing the following inferences from the experiments and reasonings which have been detailed: 1st, that taste is a special sensation; 2d, that it enjoys two media of perception; 3d, that its media of perception are the glosso-pharyngeal nerves, and the lingual and palatine branches of the fifth nerves; 4th, that the glosso-pharyngeal nerves are not its special media; 5th, that the latter nerves both are sentient, and influence muscular action; and 6th, that the spheno-palatine ganglion and chorda tympani have no influence upon either the existence or perception of the sense."

Let us turn to Mr. Hilles.

His object is to render it probable, for he cannot prove it, that the use of Meckel's ganglion is to connect the senses of smell, sight, hearing, and taste, and to play the part of sympathetic in relation to them. That there is an association between those senses no one can deny—an association similar to that which obtains between the senses and the mind itself, nay, between the senses or the mind and many of the animal and vegetative functions. If, as Mr. Hilles says, the sight of a good dinner will make the mouth water, the *recollection* of it will do the same. If the sound of the uncorking of a bottle, awakes the thirst of the drunkard, will not other sounds occasion an emission of urine or of fæces? Does not Shakspeare tell us that—

Some men, when the bagpipe sings i'the nose,
Cannot contain their urine.

If an unpleasant piece of intelligence heard, excites the secretion of the lacrymal gland, will it not also arrest the functions of the stomach, and stimulate that of the kidneys? When Harry the Eighth bullied the Cardinal, he told him on their parting—

And now to breakfast with what appetite you may.

We might go on, but the matter is too trite. We do not intend to deny the sympathies which exist between the senses, but simply to observe, that they are but a section of a system of sympathies much wider, and less explicable by direct nervous communications.

Our knowledge of the ganglia, so far as it goes, does certainly tend to endow them with the power of combining the functions of the nerves attached to them, and of keeping up what we designate sympathy between them. What influence the ganglia exert upon nutrition it is difficult to say, yet analogy and probability imply that it is considerable. The nerves which are connected with Meckel's ganglia are apparently those of common sensation and of nutrition to the nares, the soft, and the hard palate. The Vidian nerve, pursuing a circuitous course, associates with the ganglion, the portio dura, the glosso-pharyngeal, the sympathetic, the gustatory, and, less directly, the hypoglossal. But, although it goes to the tympanum, we are not aware that it has been proved to have any direct communication with the acoustic nerve, nor have the naso-palatine branches of the same ganglion been proved to anastomose with the olfactory. But, on the whole, the conjectures of Mr. Hilles are probable, and agree with the received notions of the functions of ganglia of a similar character.

We hardly know what to say of the strictures of Mr. Noble on the experiments of Dr. Alcock. They breathe a degree of asperity which is disagreeable and out of place, and which contrasts with the urbane and scientific character of the observations of the latter.

The gist of Mr. Noble's arguments is the assertion, that taste is a special sensation, and *not* a modification of the common tactile sensibility of the tongue. He chiefly grounds this opinion on two cases. In the first, that of a patient labouring under one of the forms of facial paralysis, "the common sensation of one-half of the tongue was annihilated, while the sense of taste was unimpaired." In the second case, another of facial paralysis, he "considers" that his experiments rendered it clear that, "whilst the common sensibility of the left half of the tongue was but little impaired, its specific feeling was lost." Such are the two facts which Mr. Noble opposes to Dr. Alcock's ex-

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periments, and he opposes to them also a speculative consideration, that they are impugned by a recognized principle in physiology, "*that* a simple and special function must have but one simple nerve for its manifestation."

It requires no very subtle reasoner to perceive the fallacy of the last objection, and the weakness of the former. Why is it concluded that a nerve exists for a special sense? Because it is found to be the fact. Take the case of the eye. It possesses the power of vision, and its surface has a high degree of common sensibility. In the interior of the eye, where, according to the laws of optics, an image of objects should be formed, we find a nerve expanded to receive it, and transmit the sensation of the brain. If that nerve be destroyed, vision is lost, and reasoning, experiment, pathology, prove that it is the optic, the special nerve of sight. But on the surface, where sensation is, we discover branches of the fifth nerve, which is proved in many ways to confer that function.

Apply the same process of examination to the tongue. We find its structure exceedingly like those portions of the skin, where "touch" is most acute. We find that taste resides chiefly in that portion of the tongue, where touch is also best enjoyed. We find that to the same portion of the organ there goes one nerve, the gustatory, a branch of that fifth, which gives sensation to the surface of the eye, to the skin of the face, and to the nostrils and the palate. If the analogy of the special senses proves any thing, it proves against the notion that taste is a special sense—because, in their cases, there is obviously a special nerve for the sense, and a superadded one for common sensation, while, in the tongue, there is but *one* nerve in *that* part, where taste and touch are both most exquisite.*

The cases he cites are not conclusive when weighed against the results of direct experiment, *and* when balanced in the scale of severe inquiry. It must be difficult to determine the loss of taste, when only one half of the anterior part of the tongue is deprived of it. For the experiment to be accurate, the tongue must be exposed, while we know that, for taste, pressure, moisture, and associated actions are requisite to a greater or less degree.

If, too, as is most likely, the gustatory is a nerve both of touch and taste, it is not inconsistent with what we know of the nervous system to suppose, that one function may be more impaired than the other, in a palsied condition of the nerve.

On the whole, a consideration of the anatomy, and the study of the functions of the tongue, the palate and the fauces, when supported by experiments so careful, and, apparently, so unobjectionable, as are those of Dr. Alcock, will warrant, we conceive, the following inferences:—

1. *That* taste, in the common acceptation of the term, is probably a composite sense, made up of qualities appreciated by the tongue, the palate, the fauces, and even the nares.

2. *That* it is difficult to separate, in a satisfactory manner, the sapid and odorous qualities of bodies, or rather, it is difficult, to distinguish their appreciation.

3. *That* taste and common sensation appear to be allied, in their own intrinsic characters, in the nature of the anatomical structure adapted for their development, and in the nerves which form the media of perception of them.

4. *That* taste is most perfect in the anterior portion of the tongue, and most dependent on the gustatory.

5. *That* the palate and the dorsum of the tongue, are endowed by the palatine nerves, and by the glosso-pharyngeal, with a power which we cannot distinguish from taste, though it seems much inferior to that conferred by the gustatory. Indeed it may be doubted whether the glosso-pharyngeal does confer what may be considered taste at all.

6. *That* it is a subject of well founded

* We discard the hypoglossal. We cannot suppose that Mr. Noble can deem it a nerve of sensation, when it scarcely goes to the surface, where that lies.

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regret, and not a little astoniahment, that the experimenters on this subject, did not begin by ascertaining with something like precision, the respective powers of different parts of the mouth, in regard to taste, before they attempted to determine the quota contributed by different nerves.

Emmenagogue Properties of the Hydriodate of Potash.

In a recent number of our Dublin contemporary, Dr. Pinching has drawn the attention of the profession to this remedy, which is now coming into very general use in various diseases.

The first patient on which the medicine was tried, was a female who had contracted venereal affections from her husband, and who had been repeatedly salivated. She had extensive phagedenic ulcers of the throat, which resisted sarsaparilla and other medicines. The hydriodate of potash was given in doses of ten grains three times a-day, with half an ounce of the tinctura camphoræ compos. daily, the bowels being regulated by castor oil. A good appetite was the first good effect of this plan, with refreshing sleep, and cleaning of the ulcers, which, in two months, disappeared. There had been no catamenia for four years previously. They now re-appeared, and continued regularly. Another case is detailed; but, as several remedies, besides the hydriodate, were employed, it is not so satisfactory.

On Cerebral and Spinal Apoplexy, Paralysis, Convulsion, &c. of New Born Infants. By Dr. Kennedy.

[Dublin Journal.]

We agree with this talented practitioner, that the diseases of infants are not so easily recognized or diagnosed as authors aver them to be. The mere act of crying, or the expression of the features, are poor substitutes for reason and the powers of communicating the feelings in the sick. There is considerable difficulty in the treatment too, from the natural antipathy which infants exhibit to physic, and the bad effects of forcing them to take it, during which they are thrown into violent paroxysms of passion.

In respect to cerebro-spinal pathology our author acknowledges that we have only arrived at the threshold of the subject, as far as diagnosis is concerned. The causes of this disease in infants may, he thinks, be traced to the sudden change in the balance of the circulation and respiration at birth. The attack may be a simple primary affection, exhibiting all the symptoms of apoplexy.

Case 1. A child appeared well, up to the sixth day, when it refused the breast, and suddenly fell into a state of stupor, with stertorous breathing, &c. Two leeches were applied to the head, after which the pulse rose from 60 to 120, with natural respiration. It could not suck, however, for a day or two, when it recovered. The train of symptoms were apparently dependent on simple congestion of the brain.

Case 2.—*Apoplexy with tonic spasm.* This child had a tumor on the occiput, the effect of pressure in labour. In a few hours after birth it became insensible, with laborious respiration and spastic contractions of the muscles of the neck and lower extremities resembling opisthotonos. The mæconium was freely evacuated by castor oil—a leech was applied to the fontanelle, and two to the spine—warm bath —calomel in small doses—stimulating frictions to the spine—turpentine injection. The child recovered.

Case 3.—*Secondary Apoplexy.* A child who had presented symptoms of biliary derangement and yellow skin from birth, fell into stupor and stertor on the sixth day with contracted pupils. In six hours general convulsions ensued. He recovered by nearly the same means as those already detailed. It is supposed that the apoplexy was here consequent on the biliary derangement.

Case 4. In this case apoplexy appears to have been brought on by

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leaving the child on his face for some hours. He was taken up apoplectic, the inspirations convulsive, the expirations tardy—heart acting slowly. Various means were used, but without success, and he died in six hours. The veins on the surface of the brain were found to be turgid, and blood oozed out freely when the brain was sliced. There was half an ounce of fluid in the ventricles—cerebellum congested—spinal veins turgid—lungs little crepitant, and filled with black blood—larynx filled with reddened mucus.

SPINAL APOPLEXY.

We shall abbreviate one or two cases from this division of the paper.

Case 5. A child died in 30 hours of trismus nascentium. On examination a considerable quantity of blood was found effused outside of the theca, and the veins of the medulla spinalis were very turgid and black. This case coincides with one related by Dr. Abercrombie, where blood was found effused in the spinal canal, exterior to the theca.

Case 6. On the fifth day from birth a child was suddenly seized with screaming, which continued for an hour. It then fell into a long and profound sleep, bordering on stupor. Next morning, the face was livid, eyes shut, mouth drawn to one side, arms fixed to the sides, breathing hurried, abdomen tense. It died in twenty hours. The brain, abdomen and thoracic viscera were healthy; but there was remarkable vascularity and turgescence of the spinal and medullary vessels. This might be denominated plethora spinalis.

Case 7. A healthy boy was attacked on the third day from birth, with a general convulsive paroxysm, after which the arms remained fixed, and the face livid. Leeches were applied, and aperients given, but without success. He died in twenty-eight hours.

On dissection the brain was found much congested, while the vessels of the medulla spinalis, the thecal vessels, and those about the origins of the nerves, were extremely distended. There were spastic contractions of the intestines, and the secretions were morbid in this case.

Paralysis is not very unfrequently met with in new-born infants—occurring either from injury to the nerve in the part paralyzed, or in the course of the nerve after leaving the head or spine.

Case 8. A woman had a tedious labour, the head of the child remaining long in the pelvis low down. On birth a tumor was observed on the scalp, together with a sloughing spot on the left parietal bone. The next day there was a remarkable alteration in the child's countenance—the angle of the mouth being drawn to the right side, even when the child was quiet, but very much so, when the child cried, attended by general distortion of the features. In other respects the child was healthy, and was taken from the hospital in the above state. Two or three cases of an analogous nature are detailed, but we need not notice them here.

Case 9. This was a case of hemiplegia of the left side, with ptosis, and paralysis of the portio-dura of the right side. Immediately after birth a soft tumor was observed on the right side of the head and vertex, with some excoriations on the left. The left eye was closed—the mouth drawn to the left side—distortion of the face when crying— hemiplegia of the left side of the body. The child recovered, after the application of a leech, warm bath, and stimulating liniments.

CONVULSIONS OF THE NEW-BORN.

These affections are the most common of all. The late Dr. John Clarke maintained that, in all such cases, the brain was organically affected, either directly or indirectly; whilst Mr. North denies this position. The truth seems to lie between the extremes of opinion. That convulsions can take place without irritation of the brain or spinal marrow

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at the moment, few practitioners will now aver. But the nervous centres may be irritated without being inflamed or changed in structure. Convulsions are generally symptomatic of irritation in some other part than the brain, though the latter must be engaged in the morbid circle of association, before the development of convulsions. Dr. Kennedy adduces several examples of infantile convulsions—one where catalepsy supervened on convulsive action of the muscles of deglutition—and where the child was taken from the hospital in a cataleptic state—one of convulsions preceding miliary eruption—and two fatal cases, where apoplectic symptoms ushered in death, and where the usual post-mortem phenomena were found.

We have thus analyzed the paper of Dr. Kennedy, which is of a practical nature, and contains useful facts, without any pretension to great novelty or originality.

Contagious Typhus.

Dr. Perry, one of the physicians to the Glasgow Infirmary, and a man of observation and candour, has published some remarks on this subject in the Dublin Journal. His paper is in the shape of a criticism on that of Dr. Lombard, of Geneva, which will be found in our present number. We need not enter on the points discussed, but confine ourselves to stating the results of the personal observation of Dr. Perry.

He had, for some years, entertained the opinion, founded upon an extensive series of observations, that contagious typhus is an *exanthematous disease*, and is subject to all the laws of the other exanthemata; that, as a general rule, it is only taken once in a life-time, and that a second attack of typhus does not occur more frequently than a second attack of small-pox, and, judging from his own experience, less frequently than a second attack of measles or scarlet fever. He ridicules the idea that contagious typhus may originate spontaneously from filth, bad diet, crowding, &c., and terms such notions "fancies, contrary to sound philosophy." There is certainly some plausible evidence extant, in support of opinions of the nature that he scouts, but Dr. Perry openly professes his utter want of faith. Yet he is not so sceptical as might be expected upon other points. He is satisfied, for example, that typhus fever is not contagious before the ninth day, or perhaps not till a later period than that. He thus states the reasons for this supposition.

"Among many circumstances which establish this opinion, I may mention one experiment which I made upon a pretty extensive scale. The fever wards of the Glasgow Royal Infirmary are each capable of containing twenty patients. The beds are arranged in two opposite rows, and are pretty near each other. While the patients are in the acute wards, they are not allowed the use of their clothes, though they may be able to set up; they are, therefore, almost constantly confined to bed, excepting when rising to stool; and there is about one close-stool to every three patients. Into the fever-house are admitted, cases of measles, scarlet fever, and small-pox; and patients are very frequently sent in, labouring under bronchitis, pneumonia, erysipelas, and other local inflammatory affections. I found by experience, that when the latter class of patients were sent to the convalescent ward, where they necessarily mixed with the others, almost all those who had not a previous attack of typhus fever were either seized with it before leaving the house, or returned soon after their dismissal, labouring under it; the period intervening between the time of their being sent to the convalescent ward, and the attack, never being less than eight days. Although means were taken to keep those recovering from small-pox, scarlatina, &c. in a separate room from those convalescent from typhus, the rooms being adjoining, the non-intercourse was incomplete, and the result was, that these diseases occasionally spread among the typhous convalescents, and the convalescents from small-pox and scarlatina

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caught typhus. In consequence of these observations, I adopted the practice of not sending, as formerly, to the convalescent wards, those patients affected with inflammatory diseases, unless I ascertained that they were secured against the disease by having had a previous attack of typhus; but kept them in the acute fever wards till they were so far recovered as to go to their own houses, and the result was, (and the practice was continued for several months,) that not one of those detained in the acute wards caught the disease while there, or returned with it afterwards. From the above, and other observations, I have adopted the opinion, that typhus, like measles, small-pox, &c. is chiefly spread during the period of convalescence."

Dr. Perry recommends the universal adoption of the practice of shaving the head of every fever patient admitted into the Glasgow Infirmary, and of washing well in a warm-bath every such patient, when dismissed. We are gratified to learn that he is now preparing statistical tables to illustrate points connected with fever. Its prevalence in Glasgow, and his situation at the Infirmary, will render such tables at his hands very valuable.

ULCERATION OF THE BRAIN.*

This is so rare as to confer a degree of interest on any well-authenticated case of it. Dr. Hannay, a zealous professor of Glasgow, has published the following in our contemporary of Dublin.

Case. A. G. æt. 9, Feb. 22, 1829, active, thin, and of unhealthy aspect.

Has violent pain in the forehead and heat of scalp; is pale, downcast and oppressed; pains dart suddenly through his head from ear to ear, and make him scream; he has had a most distressing night from this cause. He always applies his left hand to his brow. Nothing particular observable about his eyes; sickness and vomiting. Febrile heat and rapid pulse, 116; bowels open; tongue furred; thirst. Has for some time past been very "cold-rife," creeping close to the fire, and last night he had a slight rigor. He has been attending school regularly till three days ago. When an infant he received a severe blow on the occiput, but it has not troubled him since; and no external marks of the injury are apparent. He has long laboured under a severe cough, and occasional pain of chest, which followed an attack of pertussis. Leeches and a solution of tartar-emetic were the principal measures employed. In the night of the 23d, the pain grew so severe that his friends gave him ten drops of laudanum. He slept after this, and next morning had no pain; but there were languor, sighing, and oppression, and he complained that he saw red streaks on the wall in the dark. Pulse 68—tongue clean and moist. The leeches were repeated, and a blister ordered, but the friends refused to put it on. On the 24th, the pain in the head was severe, and there was delirium; pulse still slow. On the 26th, the tongue was furred, and the pulse is *reported* 28. Calomel and opium were the remedies now in use.

27th. Complains of much pain in his head, and of noises as if a piano were jingling in the room; great distress; pulse wiry, quick, and regular; eyes still unaffected; delirious occasionally; thirst; heat of surface; pain of head aggravated by motion. On opening the jugular vein on each side, no blood flowed. From the temporal artery eight ounces were got very quickly. The pulse reduced in force but not in frequency. Says pain of head is less, pale, and lies quite exhausted; pupil of right eye is irregular, and dilated on the light of a candle being cast on it; the left eye is natural; pain now referred exclusively to the left side of the head. Both previous blisters have risen badly; no stool; no vomiting.

At 3, p. m. of the 28th, he died.

Dissection. The sinuses of the brain, and the veins of the membranes, were distended with blood. There was a small quantity of serum between the

* Dublin Journal, Jan. 1837.

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dura mater and the arachnoid, which was opaque. The pia mater was very vascular. One or two small patches of coagulable lymph were seen on the pia mater; one on the left lobe of the cerebellum, under the tentorium; another on the under surface of the left middle lobe. They presented a ramified appearance, being deposited in the course of the large vessels. The membrane at these places appeared thickened, and the substance of the brain immediately underneath felt decidedly softer, more pulpy than at any other part, but, with these exceptions, it had a natural degree of firmness. The surface of a section of the brain presented a more than ordinary number of bloody points.

On the surface of the left anterior lobe, on its outer and under side, there was a cavity or excavation of the convolutions, partly smooth, partly granulated, of a pale primrose hue on some parts, and of the cineritious colour of the brain in others. The granulations were small, whitish, shining bodies, and gave to the surface of the cavity the appearance of being sprinkled over with oatmeal in a moist state. Over part of the surface there was a cobweb-like expansion of small vessels: this was principally on the scabrous or granulated part. The cavity was of an irregular oval shape, with an area greater than that of a shilling; its edges were more than an eighth of an inch in depth, and fringed with the membranes which had been destroyed by the ulceration; its surface was as soft as thin paste or starch, but not diffluent. The corpus callosum, fornix, corpora striata, thalami, and cerebellum, exhibited no traces of disorganization, and except the turgid state of their vessels, appeared to be healthy.

The lungs were universally tuberculated. Some of the tubercles were miliary. Others were consolidated, and approaching the softened state.

The mucous membrane, of the intestines, we presume, presented, in many parts, an ecchymosed or injected appearance.

Dr. Hannay candidly owns that he did not suspect, during the boy's lifetime, the existence of ulceration of the brain. The appearances observed by Dr. H. correspond with those described by Dr. Craigie, as characteristic of the alteration; indeed its actual nature cannot be mistaken or denied.

"The records of cases of this nature do not present us with any pathognomonic feature, any symptom by which we can recognize its occurrence. Indeed, I do not find that its existence was anticipated in any one of the cases of which we have descriptions. It is worthy of remark, that there were no convulsions, no rigid contraction of the flexor muscles, nor paralysis, though these were prominent symptoms in most of the cases detailed to us. In having an inflamed state of the pia mater, and in the brain being softened at other points, it corresponds with the cases reported by other observers, Haller, Stall, Scoutteten.

In the two cases described by Scoutteten, there was severe disease of the alimentary canal; and in the case before us, indications of gastric derangement early presented themselves, and formed an urgent part of the sufferings; distinct and extensive traces of gastro-enteritis appeared on inspection.

Scoutteten is of opinion that, in the cases he saw, the inflammatory affection of the brain and membranes was subordinate to the phlegmasia of the alimentary mucous membrane. The case given by Morgagni presented severe abdominal disease.

The intermission of pain which occurred in this case has, I find, been noticed by others in cases of ulceration of the brain. And in one case recorded by Scoutteten, pain of head did not exist."

Circumscribed False Aneurysm of the Brachial Artery, caused by Puncture in Blood-letting, and cured by Operation.

Cases of this description are possessed of interest to the practical surgeon. It has lately been proved, satisfactorily enough, that when the brachial artery, or a large branch of it, in the case of "high division," is wounded, pressure

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judiciously applied is very frequently successful. This fact is calculated to allay the apprehensions which have too often and too long infested the minds of the profession, and deterred them from remedying promptly and safely, the effects of an accident in venesection.

But when aneurysm has once occurred, an operation is generally necessary. A case of this kind has been communicated by Mr. Wall, resident surgeon to the Cork General Dispensary, to our valued contemporary of Dublin.

Case. Patrick Connell, aged 27, was admitted into the dispensary, on the 11th of August, 1836, labouring under head-ache, and affected with a circumscribed pulsating tumor, of the size of a pigeon's egg, at the bend of the arm. It was an aneurysm of the brachial artery, and had followed venesection performed in the median basilic vein, five weeks previously.

Mr. W. tried pressure, combined with antiphlogistic measures. It induced inflammation of the skin, and was abandoned in eight days. He tied the brachial artery above the tumor, on the 27th. The size of the latter immediately diminished. The pulse was discovered in the radial artery on the 3d of September. The ligature separated from the brachial on the 12th. On the 3d of October the wound was healed, and the aneurysmal tumor had disappeared. The only facts we think it necessary to particularize, relate to the temperature of the two limbs, after the performance of the operation.

Evening of the day of operation. Temperature of the affected limb in axilla 98; bend of arm 92; palm 90. Temperature of the sound limb, in axilla 96; bend of arm 97; palm 98. Pulse at wrist of left arm 84.

First day after operation. Temperature at axilla 99; bend 96; palm 92. Temperature of left arm at axilla 99; bend 96; palm 96.

Second day. Temperature at axilla 94—bend 89—palm 92.

Third day. Temperature at axilla 93; bend 92; palm 93; in the palm, under bandage, 94.

Fourth day. Temperature at axilla 96—palm 92.

MURIATE OF BARYTES FOR WHITE SWELLINGS.

The following observations contained in our Dublin contemporary, and extracted from the Gazette Médicale, are worth noticing. It appears that M. Pirondi, of Marseilles, has strongly recommended the use of muriate of barytes in cases of white-swelling, and that M. Lisfranc has adopted and countenanced the remedy. The observations we proceed to quote are taken from M. Lisfranc's Clinique.

Six grains of muriate of barytes are dissolved in four ounces of distilled water, of which one spoonful is taken every hour, except one hour before and two hours after each meal. In order to tolerate the medicine, the patient must abstain from wine and meat, taking only water and vegetable food. The bottle should not be exposed to the sun, or the salt will be precipitated, and the last spoonfuls contain a greater quantity; to avoid this, it should always be shaken. Sometimes the medicine produces slight pain in the stomach, or a feeling of weight; but if other symptoms do not follow, the stomach gradually becomes accustomed to the remedy, and the pain ceases. If, on the other hand, nausea, vomiting, or even some slight symptoms of poisoning come on, the medicine should be suspended, and cautiously resumed. The climate has some influence; for, although at Marseilles two drachms have been given, M. Lisfranc has never been able to increase the dose in Paris beyond forty-eight grains, and often he has been unable to reach that. The unpleasant symptoms have been removed by whites of eggs. Numerous patients have been submitted to this treatment, and the following are the conclusions which M. Lisfranc has arrived at.

1. Generally the white swelling has been much amended, and sometimes cured. 2. The benefit has been great-

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est amongst the scrofulous. 3. In some very few cases the muriate alone has cured. 4. After a certain time, the disease having become stationary, it was necessary to employ another method. At a later period, the renewed use of the muriate has produced excellent effects. 5. It may be employed both in the acute and chronic stage of white swellings. 6. Serious accidents have never resulted from its use; the slight symptoms before-mentioned have always yielded readily. 7. A frequent effect is a diminution in the frequency of the pulse; this falling from sixty or eighty to forty or fifty, or even to twenty-five. 8. In some circumstances the medicine, continued at the dose of twelve grains during the month, has produced as much amendment as in other cases where the dose has been gradually augmented. 9. Where the patients have been slightly inconvenienced with the medicine, it has been most useful. 10. Compression and local abstractions of blood have been often combined with this treatment, and with extreme advantage.

M. Lisfranc considers muriate of barytes, given according to M. Pirondi's method, as a truly valuable acquisition to surgery, ("une vraie conquête chirurgicale.")—*Gazette Médicale de Paris*, No. 14. 2 Avril, 1836.

Observations of this sort are well calculated to disabuse those, who look to the precepts and practice of continental medicine and surgery for improvement in their own. They are excellently adapted to display the folly of turning from the stores of facts we have at home, and from the sober experience of our countrymen, to France or Germany for practical instruction.

In the first place we see a most eminent Parisian surgeon, so ignorant of the improvements we have made in the pathology and treatment of diseases of the joints, that he not only makes use of the term "white-swelling"—a term which means any thing or nothing—a term which even the old women in this country have given up—but he evidently lumps under it a variety of diseases quite different in their characters, causes, and results.

In the second place, he recommends one internal remedy for such various, nay, such opposite complaints, and most preposterously draws a sort of average of its effects. Suppose we call the scrofulous disease of the joints white swelling. What shall we think of using a medicine like muriate of barytes, combined with a diet of vegetables and water, for that complaint? Suppose we say that white swelling means ulceration of the cartilages. What can muriate of barytes, or any other internal remedy effect, *unless* conjoined with those local measures which are of such obvious importance? In short, it is clear that the whole of the experiments on the employment of the medicine are not worth one farthing, because we are left in ignorance of the precise nature of the disease, for which it was exhibited. It was applied to all sorts of cases, without any definite understanding on the part of the experimentalist, of their variety.

Extraordinary Deformity of the Pelvis.*

A woman gave birth to five full-grown healthy children, was then attacked with malacosteon, became pregnant, required the Cæsarian section, and died of it. A cast of her pelvis was presented by Professor Nægelé, of Heidelberg, to Dr. Montgomery, of Dublin.

In the dry preparation the distance between the promontory of the sacrum and the ramus of the pubes, is scarcely a quarter of an inch, so that when covered by the soft parts, these points must have been in contact. The greatest antero-posterior diameter at either side is only an inch and a quarter, and during life could not have exceeded an inch; the sacrum is bent in so as to form a right angle, and the ilia are folded or doubled in upon themselves, like softened pasteboard. Professor N. considers it "the most perfect specimen of contraction of the kind which

* Dub. Journ. Jan. 1837.

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has ever been made known to the profession."

MR. RANKIN ON CROTON OIL IN SPLEEN.

To the Editors of the India Journal of Medical Science.

Gentlemen,—Having observed Dr. Hobson' communication in the *London Medical Gazette* of the 13th July last, on the use of croton oil as a counter-irritant, I was induced, some months ago, to try its powers on an inveterate case of enlarged spleen then in the 38th N. I. Hospital. The mode of application and the appearances produced are well described in No. 38, of Johnson's *Med.-Chirurgical Review*, page 448.

My patient was a seapoy, who, after remaining in hospital for some time under the usual treatment, without benefit, had been indulged with six months leave of absence on sick certificate, but had returned, about a month before, without the slightest diminution of the diseased viscus. Under these circumstances the oil was applied by friction over the diseased part, but whether from its inferiority, or from some peculiarity—from 15 to 20 drops were found necessary (at each application) to produce the desired effect. The patient complained a good deal, and the suppuration was very considerable, but within a week from its first application the spleen was perceptibly diminished, and the patient himself described it as feeling much lighter. At the end of three weeks the viscus was scarcely larger than natural, and the ulcerated surface being healed, he was discharged declaring himself quite well. I must not omit to mention that in treating the above case the Tinct. Fer. Mur. combined with bitter infusions, was administered internally—occasionally changed for the Sulph. of Quinine. But though perfectly willing to allow these remedies their full share of merit, the previous treatment amply proved that, even with the assistance of the Ung. Tart. Ant. externally, they were not adequate to the cure.

After treating several cases of less importance with similar results, I mentioned my success to Messrs. Barker and Row of the 66th and 73d Regt. N. I.—and was happy to hear, two days ago, that they had been equally fortunate. Mr. Row, however, found the oil prepared by himself, much more efficient than that furnished for the use of the hospital—its purgative effects being more conspicuous.

The frequent occurrence of visceral enlargement as a consequence of the fevers of the country, but I believe more particularly of Bengal, will probably render the above memorandum interesting, and I see no reason why the same remedy (with a judicious modification of the internal treatment) might not be employed with a prospect of equal success in cases of diseased liver, although I have hitherto had no opportunity of making the trial—that it may be used with *greater* benefit in many cases where the Tart. Emet. Oint. has heretofore been applied, I have experienced in several cases.

Mynpoorie, Sept. 29, 1834.

PEMPHIGUS SIMPLEX.*

A case of this unfrequent complaint is related. It occurred in a healthy looking young woman, æt. 26, just arrived from England, and nursing.

She has a vesicular eruption over the face and neck, and extremities. It consists of distinct bullæ of various sizes, from that of a pea to that of an egg, containing a limpid transparent fluid without inflamed or elevated base; in other parts there are small erythematous patches slightly elevated, and brightly red; this appearance precedes the formation of the vesicle with much itching, the bullæ when fully developed, burst and discharge their fluid contents, then either dry off in a scurf, or form a thin scab, which falls off without leaving any mark. There has been

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* India Jour. March 1, 1836.

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little or no fever; the tongue is clean and moist. Bowels confined.

Castor oil with a drink of cream of tartar and antimony were the means employed. On the 3rd day, we find the following report.

Several small vesicles inside of the cheek and on the tongue. Eyes are turgid, the eruption is more general on the chest and shoulders, disappearing from the extremities; new vesicles succeed the disappearance of old ones, but the intermediate skin is of a natural appearance, and the limbs are not swollen.

In the evening of the 6th she had a slight shivering fit, succeeded by pyrexia, for which calomel and antimony, with purgatives, were ordered.

On the 10th day there was no fever, fewer vesicles appeared, and the ankle was slightly swollen. She was ordered quinine, with rhubarb pills, and on the 18th day, the eruption had entirely disappeared, and left only a trifling discolouration where the largest bullæ had been.

Retention of Urine after Amputation of the Penis.*

A Fakeer either amputated his penis himself from devotion, or had it amputated by others for the reverse. It was removed close to the pubes. Gradual contraction of the urethra at the stump occurred, and, his case baffling the village doctors, he applied to Mr. Stuart, military surgeon, at Baroda. The patient was feverish, and had pain and irritation about the anus and the hypogastrium.

"The wound left by the removal of the penis was healed, and presented an irregular knobby surface, without any *perceptible* opening for the urine to escape. On desiring him to void his urine, he pressed with one hand above the pubis, and drew the other along the perineum, forcing out, with each stroke with his hand, the least possible quantity of urine. In this way he had relieved himself for several days. By watching narrowly I was able to discover a very small opening through which the urine oozed, and attempted to introduce a fine probe, but only succeeded to the extent of about one-third of an inch. I ordered him castor oil, and warm fomentations, directing him at the same time to continue his efforts in voiding as much urine as possible till morning, when something would be done for him. The following morning I saw him in company with Assistant Surgeon Stowell, he was less excited and feverish, but complained of great pain when pressed on the abdomen. It being impossible to ascertain the extent of the stricture (the flow of urine not being perceptible in the perineum) we determined on cutting down on the urethra as low as possible, and be guided by circumstances in completing the operation. The patient being placed as in the operation for stone, I commenced by making an incision along the raphé, through the skin, and cellular substance. On cutting through the ejaculator and corpus spongiosum into the urethra, an inch below the scrotum, it was thickened, and *apparently* impervious. The incisions were continued down to the bulb and a few drops of urine flowed. I then introduced a probe and lengthened the incisions till a full-sized catheter easily passed into the bladder. Upwards of a pint of ropy urine was discharged. The catheter was left in the bladder and the wound lightly dressed with lint dipt in oil."

All went on well, the wound soon healed, and he was directed to introduce a bougie occasionally. He could retain the urine perfectly. He subsequently lost his bougies, and contraction of the new orifice occurred. By dilatation this was again remedied. The case displays the tendency to contraction on the part of the urethra when divided, and the necessity of habitually employing bougies when it exists. It is a plain illustration of an important fact.

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* India Journal, No. XII.

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CHANGE OF FORM IN THE HEAD, CONCURRENTLY WITH CHANGE OF CHARACTER AND TALENTS.*

We must carefully separate the principles of phrenology from the details. Yet they are constantly confounded, especially by those who affect to laugh at the whole doctrine. If we grant, and it is difficult to disprove it, that the brain is the organ of the mind—and if we admit, which it is difficult to dispute, that what we term the mind is an aggregate of many qualities, it follows logically, that the material organ must itself be made up of many parts, adapted for those many functions. Absurdity does not stick to such a view, but to the converse, and, so far as reasoning can go, it points out not only its propriety, but its necessity.

When we leave this essential principle of phrenology, and endeavour to determine and verify its details, it must be owned that we meet with many difficulties. In the first place, we have to determine what the primitive faculties of the mind are—a metaphysical and abstruse inquiry. Supposing we succeed in that, a task, perhaps, more arduous still awaits us. We have to ascertain what portions of the brain correspond to the faculties we have agreed on. This investigation is no longer metaphysical, but one of strict observation. It would be out of place here, to enumerate the fallacies to which such observation is exposed; but it may be granted, by the most enthusiastic lover of phrenology, that when all that elevates his science above the mere enunciation of an abstract principle hinges on the accuracy of his facts, he is interested in securing such accuracy by every means in his power. Loose observations have damaged phrenology much—inferior observers have degraded it—mountebank professors of it have gone far to render it ridiculous. We have, on several occasions, stepped forward to impress on the minds of the really able phrenologists, the necessity of repressing the *niaiseries* of the small fry about them, a duty which they owe to their own reputations. We shall continue to point out now and then what appear to us to be vague or inaccurate statements.

Mr. Silas Jones, an American phrenologist, has published a work, for the purpose of shewing that great changes in mental faculties may be combined with corresponding changes in the form or dimensions of the cranium. This is a proposition which carries with it nothing improbable or ridiculous. But some of the facts that he adduces in its favour are not such as would convince the sceptical. For instance:

"I have several facts, founded not upon observations made from comparison of casts, but still they are such as to be entitled to our confidence. A young artist of my acquaintance had formerly been a dealer in dry goods, and a few years since commenced the business of portrait-painting. He had been absent for several years from his mother; when on a visit to her, she called him up to her, and observing every part of his countenance carefully, said, 'your forehead has altered in form since I saw you, all the lower part of it seems to be pushed out.' This was the careful observation of a fond mother, when tracing out the lineaments of a beloved son. It was no doubt true. Nearly all the perceptive organs are now very decidedly large; and he says they have increased in size since he commenced his new vocation. Young men in cities, it will be found, have greater power and activity in the perceptive organs, than those who have always been in country situations. There is a constantly changing succession of objects in cities, which give ample scope and stimulus to these organs. These rapid changes are unfavourable to quiet reflection, hence the knowing organs acquire a great ascendancy.

I have noticed in very many instances that experienced navigators have the organs of Locality very prominent, and probably in consequence of great exercise of them. So with blind people, these organs become very large. It is the case of a blind man in Boston, who

* Phrenological Journal, Dec. 1st, 1836.

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travels in every part of that city without a guide."

We fear that the good old lady's astonishment at the growth of her son's forehead will not be deemed conclusive by the antiphrenologists, who may reasonably demand some more positive and accurate admeasurements than have been offered.

Hunteriana.*

The following short anecdotes of some celebrated men in our profession, are extracted from the first volume of the complete works of John Hunter, edited, and just published, by Mr. Palmer. That volume will be noticed more fully in another place. In this, we shall confine ourselves to extracting a few anecdotes, which cannot but interest a profession which owes so much to the men whom they refer to.

It is not, however, the view of merely gratifying curiosity which prompts us to do this. We do not profess to cater for the amusement of our readers, but to lay before them what will tend to their advantage. Utility is our avowed and constant object; but utility in a comprehensive sense. The accumulation of facts, their analysis, comparison, are the means best calculated for attaining the end we have proposed. But surely it is useful to see what the ablest men have done, to mark the steps that they have trod upon the painful road to eminence, and to learn the indubitable truth, that success in their case, as in that of all, has been the result of unceasing and well-directed exertion.

There is a clique in the profession, who, hopeless of honest fame and of true eminence, are naturally jealous of those who have had, who have, or who are like to have, what, unwillingly, they are compelled to despair of getting. To their jaundiced eyes, all is indeed yellow. Their bile overflows at the mention of successful talent, and they vomit it in the shape of generous declamation against monopoly, aristocracy, and those thousand sins which, in spite of them, society *will* cherish. It is said that "there is a joy in woe." There must certainly be a pleasure in the expression of malicious discontent, independently even of that reward so sweet to ultra-liberals, we mean, "what it will bring." There must be such a pleasure, or we should not witness, so frequently as we do, the ostentatious and gratuitous exhibition of malignity. To these unhappy persons, the following anecdotes will be gall and wormwood, because the actors succeeded in life. In the right thinking part of the profession, the vast majority of its members, they will give birth to much delightful, and some useful reflection.

1. *Talent in the Families of the Hunters and the Baillies.*

"Mr. Wardrop, in his interesting life of Dr. Baillie, observes, that 'the extent of talent united in his family and connexions was remarkable. He was not only the son of an able Professor, and nephew of the two Hunters, but his sister, Miss Joanna Baillie, has attained the most elevated rank in literature. Mrs. Baillie's sister was married to the late Sir Richard Croft, a man whose name is endeared in the recollection of many, as well for his manly and upright heart as for his professional celebrity: and Mr. Denman, who has distinguished himself so much at the bar (now Lord Chief Justice), was Dr. Baillie's brother-in-law."

2. *What Lectures on Anatomy and Surgery were.*

It has lately been proposed by some, who profess to wish for a radical reformation of the profession, that the vile system of lecturing and of certificates should be burked, and that we should return to the practice of the good old times, when every master, an admirable Crichton, instructed his apprentice in every branch of medicine. It is easy to conceive the benefits that must spring from such a system. As it will, probably, be soon adopted, we may mention the mode in which the present infamous as well as ridiculous plan took root.

"It was customary for the lecturers

* The Works of John Hunter, F.R.S. with Notes. Edited by J. F. Palmer, Esq. &c. Vol. I. 1835.

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of that day, 1745, to treat in one course on a number of subjects, sufficient to furnish matter for three or four distinct courses according to our present system; and the meagre amount of information afforded to their hearers may be judged of by the following facts, mentioned by Mr. Chevalier in his Hunterian Oration. Mr. Bromfield, who was surgeon to St. George's, and a lecturer of considerable note, comprised anatomy and surgery in a course of thirty-six lectures. Dr. Nicholls, at whose school Wm. Hunter studied, professed to teach anatomy, physiology, and the general principles of pathology and midwifery in thirty-nine, and Mr. Nourse of St. Bartholomew's embraced 'totam rem anatomicam' in twenty-three lectures."

This plan was an approach to perfection, for the next best thing to no lectures at all, must be lectures so curtailed as to be good for little. We have arrived at a formidable pitch of corruption. Now *one course* of anatomical lectures lasts for seven months; and comprises about 150 lectures, and as many demonstrations. A frightful enormity.

It is worth while observing the encroachments of the surgeons on the physicians. The former anciently possessed the learning and science of the profession—the latter were the handicraftsmen, and were kept down by their association with the barbers. It is customary to imagine that the divorce of the two professions of shaving and of surgery, was the cause of the latter. It was essentially its consequence. Of course it was advantageous to get rid of the pole and the soap-dish, but the progress of society, and the advancing education of the surgeons demanded it. The same circumstances operated to make the physicians really physicians, and to force them to abandon lecturing on anatomy.

"It was not until 1745 that the alliance between barbers and surgeons was happily dissolved: before this time, any surgeon dissecting a body out of their Hall was liable to a fine of ten pounds. Amongst other privileges, they possessed the right of claiming annually the bodies of four executed felons, which probably led Dr. Caius to choose the Barber-Surgeon's Hall, to deliver his anatomical lectures in, soon after their incorporation in 1540. From this time to the dissolution of the company, their readers of anatomy were, with very few exceptions, chosen from the College of Physicians, to whom, with the exception of Cowper and Cheselden, is due the merit of supporting the fame of this country in anatomical pursuits, from the time of Caius to that of the Hunters. In the list of physicians who successively taught anatomy in England, we find the names of Caius, Harvey, Glisson, Mead, Willis, Lower, Wm. Hunter, and last, though not least, of Matthew Baillie. With Dr. Baillie ended the race of Physician-Anatomists, with the exception of Dr. Wilson, who lectures at the present day. This resignation of the professor's chair of anatomy on the part of the physicians, arose not however from any lack of able men to fill it, but from a conviction that the surgeons were now fully capable of instructing their own pupils, and with more practical effect."

Since this passage was written, Dr. Wilson has resigned the anatomical lecturer's chair, and this "last rose of Summer" is like—

"Its lovely companions, all faded and gone."

Difficulties of Genius.

Lord Eldon, we believe, observed, that most of the Lord Chancellors come from the garret. Most of our greatest men have come from apartments not very much lower. There is nothing like an empty stomach, for stimulating men to work. The gastric juice is a very excellent fillip to an idle man.—William Hunter's means were limited, when he started in London.

"In proof of this, Mr. Watson, formerly surgeon to the Westminster Hospital, and one of Wm. Hunter's earliest pupils, used to relate, that as they were walking home together after the introductory lecture, the latter, who carried a bag containing seventy guineas, which he had received for entrance fees, remarked, that this was a larger sum than he had ever before been possessed of. Linnæus gives a similar account of his

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own slender beginnings where he says, 'Exivi patriâ, triginti sex nummis aureis dives;' and it is related by Sir James Earle, that at Pott's death, a small box was found among his papers, containing a few pieces of money, not amounting to five pounds, being the whole which he ever received from the wreck of his father's fortune. Such anecdotes may serve to encourage those who, at the outset of their journey through life, chance to have their purses but slenderly furnished: numbers more might be found by a reference to the lives of eminent men in all professions, many of whom, though they have afterwards reaped a bountiful share of the favours of Fortune, were doubtless obliged, on their first starting in life, to have recourse to shifts quite as curious as those of Johnson's Irish friend, who in describing how a man may live respectably in London on thirty pounds a year, allots ten for the expenses of clothes, and provides that all visits are to be paid on *clean shirt days.*"

John Hunter amongst the Gods.

Most people are aware that John Hunter was an idle, if not debauched young man. But they may not be aware, where his tastes led him, nor the sort of associates which genius such as his delighted in. He would seem, like "Prince Hal," to have relished the society of the coarsest, indeed the most brutal of mankind.

"Here, as in graver matters, his ambition urged him to take the lead of his companions, amongst whom he went by the familiar title of 'Jack Hunter.' Nor was he always very nice in the choice of his associates, but sometimes sought entertainment in the coarse broad humour to be found amid the lower ranks of society. He was employed by his brother to cater for the dissecting-room, in the course of which employment he became a great favourite with that certainly not too respectable class of persons the resurrection men! and one of the amusements in which he took especial pleasure, was to mingle with the gods in the shilling gallery, for the purpose of assisting to damn the productions of unhappy authors, an office in which he is said to have displayed peculiar tact and vigour."

A series of fortunate accidents combined to draw this boisterous, rude, and vulgar young man to the study of a science which his genius was to revolutionize. To William Hunter the profession is undoubtedly indebted for the development of John; and their history naturally reminds us of what has been said of Dr. Beddoes—"if he was the discoverer of nothing else, he was the discoverer of Davy."

John Hunter preserved from being made an Old Woman.

In 1753, Hunter entered as a Gentleman Commoner, at St. Mary's Hall, Oxford. Whether his brother wished him to become a physician or an accoucheur is not quite certain, but the following is John's own account of the transaction.

"In speaking of this period of hislife some years afterwards to Sir Anthony Carlisle, then a student at the hospital, Hunter said: 'They wanted to make an old woman of me; or that I should stuff Latin and Greek at the University; but,' added he, significantly pressing his thumb-nail on the table, 'these schemes I cracked like so many vermin as they came before me.' It was fortunate, probably, that he decided as he did, for though his future progress was slow, the roughness of his manners would have been a still greater impediment to him in either of the other branches of the profession."

This contempt for learning is itself contemptible. But in Hunter's case it is palliated by the results, and by the reflection that in him it was not the expression of the barbarian pride of an illiterate man, but the outbreak of a genius essentially one of action.

Encouragement given to Science by the English Government.

Our Government is the most philosophical imaginable. Whigs and Tories have in these latter days exhibited no difference of opinion upon one point—the folly of patronising science. To it they apply with the most exemplary

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rigour, the economical principles of supply and demand. If science is wanted, the people will pay for it—if it is not, let it go to the dogs. They have, properly enough, drawn a broad distinction between what is useful and what is not. Science is the former, and its utility should be left to support it. But the services of some young gentlemen and ladies are not capable of being appreciated by the public, and a discerning Government has accordingly taken *their* reward into its own hands. Thus it has happened that the pension list has exhibited the names of many excellent individuals, but of very few scientific ones. The former, to be sure, have usually happened to be relatives, dependents, or friends of the party in power at the time. But that was accidental, and if merit existed so very near home, it would have been the more inexcusable to have neglected it.

Within these very few years our public men have been shamed into something like respect for science. It must be owned, to the honour of Sir Robert Peel, that he led the way in evincing a practical regard for it, and in bestowing a mite from the public purse upon men of talent in need of it. After many wry faces the Whig Government has been forced to follow his example, and though it has been done in the most ungracious manner possible, it has been done.* Let us hope that the time is approaching, when a great and wealthy nation, raised and supported by industry and commerce, will evince its gratitude to the arts and sciences by which that commerce has been materially enlarged, and which give to civilization many of its comforts and almost all its ornaments—let us hope that the day is not remote, when a people who will spurn the idea of pensioning the parasites or pimps of minister or court, would freely extend their liberality to philosophy; and encourage, as a great empire should, the pursuit of studies, beneficial in their consequences to humanity, but not possessed of such immediate and practical utility, as to afford a decent and honourable subsistence to the individuals who prosecute them. What has been the practice the following anecdote will prove.

"Dr. Hunter had, in the year 1765, in the most liberal way, proposed to the then Ministry to build a public theatre of anatomy, at an expense to himself of 7000*l.*, and to endow a professorship of anatomy in perpetuity, on condition that they would grant a piece of ground in the Mews as a site for the building. But Lord Grenville and his colleagues, with the apathy which the English Government has too often shown to the interests of science, declined the offer."

Hunter an indifferent Lecturer.

A very slight acquaintance with Hunter's works, would create the idea that he was not adapted to convey information to young men. The great requisites for a successful lecturer are methodical arrangement, simplicity, and clearness of description, and a certain amount of eloquence. If the lecturer has genius too, so much the better; but no genius, uncombined with these requisites, can qualify him to excel in the oral instruction of young men. Let us glance at Hunter in the surgical chair. His class never exceeded thirty.

"To a pupil (Sir Astley Cooper) who asked with surprise, whether he had not the year before stated an opinion on some point, directly at variance with one he had just put forth; he replied, 'Very likely I did; I hope I grow wiser every year:' and to the same purport he answered Professor Coleman (another of his pupils), who asked whether he had not written so and so; 'Never ask me what I have said, or what I have written; but if you will ask me what my present opinions are, I will tell you.' Occasionally, too, he would say to any of the pupils whom he saw taking notes, 'You had better not write down that observation, for very likely I shall think differently next year:' and on one occasion, after lecturing for a considerable time, he stopped short, raised his spectacles, and said, 'Gentlemen, I think

* We allude to the pension of Mr. Faraday.

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you had better omit what I have been saying; the fact is, I had an idea when I wrote down this, but I have lost the train of thought connected with it, and I cannot now recall it.' Such a mode of lecturing was not likely to become popular; his class consequently never exceeded thirty, and not half that number derived much benefit by their attendance."

Hunter not a mere Operator.

It would be either idiotcy or imposture to contend that the power of operating well, is not a highly desirable natural gift to one who intends to be a consulting surgeon. But it is as absurd to pretend that that power should not be subservient to the higher intellectual qualities—that it should not be regulated by judgment, caution, and humanity. The mere operator is both a dangerous and a disgusting person, and none but the very weak and very ignorant can either admire or trust him. Fortunately operations are becoming daily less frequent, because the advance of science teaches us to prevent the necessity for their performance in many cases, and to refuse to perform them in others.

It is certain that Hunter was not what is called a dashing operator. He did not carve his way to reputation on the living. He did not aspire to be a prince of butchers. His head, not his hands, made him what he was—the intellectual, not the handicraft head of his profession. Like Cheselden, he felt that operations are really the disgrace of surgery. His sensibilities were not so fine as Cheselden's, and in him the sentiment was rather the result of reflection than of deep feeling.

" In the opinion of Sir Astley Cooper, whose judgment on the subject must be considered as at least as likely to be correct as that of any man living, Hunter scarcely deserved to be considered a dexterous operator, certainly not an elegant one; but his large experience, and his extraordinary skill as an anatomist, almost always enabled him successfully to complete any operation he undertook: though slow, he was sure. Hunter does not seem, indeed, to have been ever ambitious of particular renown in this field. He used frequently to say, 'To perform an operation, is to mutilate a patient we cannot cure; it should therefore be considered as an acknowledgment of the imperfection of our art.'"

Hunter's early rising and little Sleep.

Hunter generally began working before six in the morning, dissected till nine, breakfasted, saw patients at his own house till twelve, dined punctually at four, drank little or no wine, slept for about an hour after dinner, and went to bed about one or two in the morning. The following anecdote will shew his habits in respect to early rising. It may be questioned whether the "diluculo surgere saluberrimum," would apply so much to his body as his mind.

" On his arrival in London, Mr. Thomas, in company with Mr. Nicol, by whom he was to be introduced, called on Hunter; they found him dressing. 'Well, young gentleman,' said Hunter, when the first ceremonies of introduction were over, 'so you are come to town to be a surgeon; And how long do you intend to stay?' 'One year,' was the reply. 'Then,' said he, 'I'll tell you what, that won't do; I've been here a great many years, and have worked hard too, and yet I don't know the principles of the art.' After some further conversation, Mr. T. was directed to call again in an hour, which he did, and accompanied Hunter to the hospital, where he said to him, after the business was over, 'Come to me to-morrow morning, young gentleman, and I will put you further in the way of things; come early in the morning, as soon after four as you can.' It was summer: Mr. Thomas kept the appointment, and found Hunter, at that early hour, busily engaged in dissecting beetles."

His Infirmity of Temper.

Perhaps few *faults* bring their own punishment more certainly than a bad and irritable temper does. Molière, in his play of the "Grondeur," hits off the miseries of an ill-tempered person to the life. The man who will neither have the door open nor shut, must be

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a discontented one. Hunter, a man of great genius, strong passions, and no education, naturally gave way to an irritability which his labours tended to increase, and found in age the evil consequences of the want of that moral culture and discipline, which in youth had not been enforced by others, and which the strength of his manhood led him to despise. He was not on good terms with the profession—he quarrelled with his brother—and died from the effects of an altercation with his colleagues. Labouring under angina pectoris, continually exposing himself to contradiction and to mortification by his overbearing disposition and his ungovernable temper, his last years must have been far from enviable, and the confession was extorted from him, that "his life was in the hands of any rascal who chose to annoy and teaze him."

His words were borne out by the event. On the 16th of October, 1793, Mr. Hunter went down to the board-room of St. George's Hospital, the scene of many former contests with his colleagues, and brought forward the petition of two young men, that they might be admitted pupils of the hospital, in opposition to some standing orders of the governors. In the course of his remarks, he was flatly contradicted. He immediately ceased speaking, hurried into an adjoining room, and fell lifeless into the arms of Dr. Robertson.

He died of angina pectoris, some fits of which he had previously laboured under. The muscular structure of the heart was pale and flabby—the coronary arteries were ossified—so were the mitral valves—the aorta was dilated, its inner surface studded with opaque spots, and its valves thickened.

Thus died John Hunter, a man of no education, great genius, and wonderful industry. Whether education would have spoilt that genius, and damped that industry, is a question which cannot now be solved, and which different persons may be inclined to answer in different ways. As an abstract proposition, it will not be doubted that education, which means improvement of the mind, cannot possibly be injurious to it. But certainly particular *modes* of education do interfere with particular trains of reflection, and, by occupying our time and engaging our tastes in the acquisition of what others have thought and done, they tend to cramp the spirit of originality. Perhaps it was fortunate that Hunter had not the species of education which was then to be obtained. He lived in a transition period, when science required revolutionizing, and his rude, unlettered genius, exclusively directed, by his ignorance of antiquity, to the study of existing objects, was calculated to overpower, by the mass of facts that it accumulated, the scholastic dogmas of the age. Such a revolution must and would have taken place, had no John Hunter existed. But we owe it to him, that England has assumed the position that she has, in elevating medicine to a science. In this country, money is so necessary to all, that men of talent and ambition devote themselves to those immediately practical pursuits, which lead directly to profit and wealth. Education tends to encourage this, because it naturally makes those who are endowed with it solicitous to mingle with the classes in which education and refinement obtain. A man like John Hunter would have no such feelings. His unacquaintance with literature unfitted him for polite society—his bad temper and worse manners shut him out of it—his feelings and his tastes pointed out for his associates those to whom he was not conscious of inferiority—to enjoy such acquaintance, and the pleasures they would bring, little wealth was requisite—and we cannot be surprised if the chum of resurrection-men, and the damner of plays in the one-shilling gallery, should feel that the pursuit of wealth was even irksome, in comparison with the undisturbed prosecution of his peculiar studies and amusements. When called to a patient while dissecting, he exclaimed to Mr. Lynn—"Well Lynn, I must go and earn this d——d guinea, or I shall want it to-morrow."

Untrained genius like Hunter's is ever in extremes. The cold rules of mediocrity and prudence are unable to

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restrain it, whichever way it points to, right or wrong. A first-rate burglar, were circumstances different, might be the raw material of a hero—and the greatest vagabonds are notoriously the most clever fellows of their class. The deer-stealer, who was subsequently the poet "of all time"—the associate of Falstaff and of Pistol, who proved one of the greatest of England's Kings—the debauched and riotous anatomical student, who was afterwards John Hunter, are all examples of this moral truism. The spectacle of his brother William Hunter acquiring fortune and fame—the emulation gradually excited by the success of men whom he felt to be in talent his inferiors—the consciousness, perhaps, to a noble mind so dreadful, of time lost, opportunities wasted, powers thrown away, all goaded him on to those wonderful exertions that he made, and developed that enthusiasm, the offspring of genius and the agent of its achievements. Such enthusiasm was exhibited in a remarkable degree by this extraordinary man. An instance or two will exhibit at once his love for science, and his disregard for pecuniary considerations.

While engaged in his researches upon whales, he engaged a surgeon at his own expense to proceed to the North in a Greenland whaler, after instructing him in anatomy, and furnishing him with all that was useful. All he got in return was a bit of whale's skin, with some barnacles stuck on it.

When O'Brien, the Irish giant, died, particular care was taken of the body. Mr. Hunter actually paid five hundred pounds to get possession of it.

Here we must pause. John Hunter is not only an individual, but the representative, of an age gone by. There is, and there always will be, an ample field for industry and talent. But their application must vary with the character of the times, and, in our own, we fear that the object they will point to, is wealth. Of Hunter we may safely say, that "we ne'er shall look upon his like again."

Obscure Medullary Disease of the Stomach. By Jas. Johnson, M.D.

A gentleman (Mr. Sandy), aged about 45 years, became affected with uneasy sensations about the stomach or upper bowels, varying from an hour to three or four hours after taking food, especially the dinner meal. The pain was seldom acute, but rather it was a sense of distention, attended with eructations of air and acid, and continuing till the digestive process was finished. There was no vomiting or sickness—or scarcely any, during the whole period of the disease, which lasted 16 or 18 months. At an early period of the malady, and many months before he came under my care, he passed, as was supposed, a mass of hydatids. It is probable that this was a mistake, and that the discharge consisted of gelatinous matters, which occasionally passed afterwards, while I attended him. He had been attended by several medical gentlemen, none of whom could make up their minds as to the real nature of the disease, or even its precise seat. This was also the case with myself. When I first saw him in July, 1836, he was emaciated, sallow, and unhealthy in aspect. On stripping him there was no tumour visible or tangible in any part of the abdomen. But when he strained, there could be felt a very small induration three or four inches above and to the left of the umbilicus, devoid of pain on pressure. This induration could not always be felt at first—but for the last two or three months of his life I could always feel it, and considered that it had got larger.

The phenomena of pain after food still continued, as well as the emaciation, without any fever or other constitutional derangement. About the middle of November he was seized in the night with syncope, and he was supposed to be dying. A surgeon in the neighbourhood was called up, and administered some cordial, by which he was revived. I saw him the next day, and found him much paler and more depressed than he had been. On examining the abdomen, there was a greater fulness in the epigastrium than usual,

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but the distinct induration could no longer be felt. This puzzled me a good deal. There was no motion for three or four days, although aperients were exhibited. At the expiration of this time a large substance was passed, after great difficulty, together with much fæces, and, on examination, there appeared in the commode what resembled exactly about eighteen or twenty inches of the ileum inverted and reddened. It could be lifted up on a stick and handled, without breaking to pieces. This created alarm, and I was summoned. I could not, at first, determine whether or not it was an organized substance. It was taken to the Anatomical School in Kinnerton Street, and there washed and examined carefully. It was found to be a coagulum of blood, deprived of much of its colouring matter, and so exactly taking the mould of the small intestine, that the valvulæ conniventes, &c. of the bowel were most beautifully exhibited. On examination of the abdomen now, the fulness of the epigastrium was gone, and the original hard knot was felt as usual. The bowels now became regular and healthy, as were all the secretions. But the pain and sense of distention, some hours after taking food, became gradually more and more distressing, so that, for some days, he could hardly be prevailed upon to take any thing but liquids. After the complete digestion of the food, he got free from all uneasiness, and was cheerful and comfortable till the next day after dinner. All this time there was no sickness or vomiting; but the flesh gradually and steadily vanished, till he became a mere skeleton. In December and January last, the pain and sense of distention after food became so great that he was obliged almost to starve himself to avoid the tortures of digestion. This, of course, accelerated the emaciation, and he died exhausted on the 13th January, 1837.

The body was examined next day by Mr. Henry James Johnson, and Mr. Hutchinson, of Farringdon Street—a gentleman who had formerly attended the patient. The following were the minutes of dissection.

"1. Body much emaciated.

2. No induration perceptible *after death*, through the abdominal parietes.

3. *Abdomen.* The stomach was concealed by the transverse arch of the colon, which overlaid it, and which, at its left extremity, was bound down by adhesions in the left hypochondrium.

The stomach was small. The left lobe of the liver was intimately united to it; the lesser omentum being almost obliterated.

On opening the stomach, its internal surface presented numerous projections of medullary structure, which extensively occupied the lesser, the greater curvatures, and the cardiac end of the stomach, as well as the termination of the œsophagus in the stomach. The mucous membrane covering the morbid growths was ulcerated, as were the morbid growths, in some degree, themselves.

The pylorus was healthy. The termination of the duodenum in the jejunum was adherent to the morbid growth of the stomach.

The intestines were healthy."

The can be little doubt that the hæmorrhage which formed the remarkable coagulum some weeks before this gentleman's death, proceeded from one of the ulcerations in the stomach—and there is great probability that the supposed cluster of hydatids discharged at an early period of the disease, was only some morbid secretions from the stomach or intestines. None of the medical gentlemen who saw this patient hit upon the true pathology, some considering it one thing and others another. I could not bring myself to think the stomach itself was the seat of the disease, from the absence of vomiting, and from the long interval between the taking of food and the commencement of pain. The adhesions between the stomach and left lobe of the liver, as also those which bound down the transverse arch of the colon that concealed the stomach, contributed much to the difficulty of diagnosis. The case, however, is very instructive, as shewing how accidental circumstances may render the diagnosis and prognosis most perplexing and erroneous.

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Spirit of the Foreign Periodicals, &c.

Discovery of the Natural Cow-pox at Passy near Paris—Report of M. Bousquet.

The genuine cow-pox is of extremely rare occurrence among cattle. The cow is subject to other eruptions, besides the true one, on the udder; and these have very generally been mistaken for the genuine vaccinia. We have heard a great deal, of late years, of epidemics of the cow-pox in various parts of France and other countries; but with the exception of one or two, at most, of these alleged instances, we believe that the disease was in all of the spurious kind. We have visited many of the dairies, where it was reported that cow-pox prevailed; but hitherto we have not met with a single satisfactory case of the genuine eruption. Cows are very subject, during certain seasons, and especially after calving, to various eruptions on their teats—they are called by the country people "feux de lait." But these eruptions never exhibit those characters, which Jenner has very properly described as pathognomonic of the real and effective cow-pox. The vesicles of the latter always present a blueish or somewhat livid hue; they are surrounded with an erysipelatous redness, are apt to degenerate into troublesome phagedenic sores, and are usually accompanied with a good deal of disturbance of the animal's system.

It is probable that the genuine cow-pox is not nearly so rare as we suppose: possibly it is often overlooked; but most certain it is that, of late years, it has been seldom discovered in any dairy. Until last year, no authentic and quite trustworthy account of its having been observed in France, has been ever recorded; and in England, the parent country of cow-pox, the lymph, at present in use there, is that which has been kept up by successive vaccination of the human subject, from the time of Jenner. No doubt, if medical men paid more attention to the diseases of the lower animals, and were in the habit of visiting dairies for the purpose of discovering the genuine cow-pox, numerous opportunities of renewing the lymph from the original source might very possibly have been found: but so it is, as we have stated. The ancient committee of vaccination in France alluded to only one instance of the genuine cow-pox having been observed by any of their correspondents; and that instance is of very doubtful accuracy. It occurred in Prussia during the year 1812, and the account of it is far from being satisfactory. Since the date mentioned, a score, at least, of physicians in different parts of France have described instances of genuine cow-pox observed by them; but in all these, without exception, the failure of vaccination with the lymph has sufficiently proved the error of the announcement. In 1832, Dr. Maceroni of Rome examined several cows which had been recently sent from Switzerland, and which, it was said, were affected with cow-pox. Unfortunately the eruption had nearly passed away; but he obtained a few of the crusts of the pustules; these he beat down with water to the consistence of oil, and used the fluid, *successfully* in one or two cases, for the purposes of vaccination. We are not acquainted with the particulars of these experiments. The recently-published accounts of the genuine cow-pox in the beast at Wurtemburg, by Prof. Ering, and at Amiens by Dr. Autier, are far too meagre and imperfect to warrant reliance. I, says M. B., tried some of the lymph sent to Paris by Dr. Autier, but did not succeed with it in one operation.

In the beginning of 1836, the French journals teemed with reports, from different quarters, of the genuine cow-pox having been discovered. I visited a number of the places contiguous to Paris, and wrote to a great number of medical men residing in the more distant districts, where, it was alleged, that the disease existed; but not in one instance have I been satisfied of the existence of the genuine cow-pox. M. Dupuy accompanied me in several of the excur-

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sions I made round Paris, and he also was equally unconvinced.

We come now to mention the particulars of the recent *indubitable* discovery of the disease at Passy.* A countrywoman had gone to Chaillot, to consult Dr. Perdrau there. She was suffering from feverishness, and was otherwise indisposed. Dr. P. noticed some pustules on her hands; and on examining these, he was immediately struck with their resemblance to the genuine cowpox. He questioned her:—"Quel métier faites vous?—Je suis laitière. Avez vous remarqué au pis de vos vaches des pustules, à peu pres semblables à celles que vous me montrez?—Oui, Monsieur, et je crois bien que je les ai gagnées. Aviez vous des gercures aux mains?—Oui, Monsieur."

This account was sufficient to excite Dr. Perdrau's curiosity. He, therefore, sent the woman to be examined by M. Nauche, and by M. Bousquet (the author of the present memoir). They found three pustules on her right hand; one on the thumb, another on the back of the ring finger, and the third near the point of the fore-finger. There was also a similar pustule on the upper lip, near the right commissure of the mouth. The pustules were three or four lines in diameter, globular and prominent; their edges and the surrounding areolæ were of a blueish hue, such as I never observed before in cow-pox, but which at once recalled to my mind the description which Jenner has given of the pock on the cow. The usual appearances of the vesicles, as we now see them after vaccination—their central depression and their silvery white aspect—were very indistinctly marked; but this may have been partly owing to the advanced stage of their progress. The contents of the pustules were thick, yellowish-white, and purulent.

Nine children were inoculated with the matter, by three punctures on their left arms; and at the same time (but with another lancet), with ordinary vaccine lymph, by three punctures on their right arms. In one of these nine children, neither of the two inoculations produced any effect. In the other eight children, all the punctures on their right arms (with the ordinary lymph) succeeded, with the exception of one infant in whom one only of the punctures was followed by a vesicle. Of all the punctures on the left arm, (with the matter obtained from the pustules of the woman Fleury's hands,) three only, one in each of three children—Denis, Dubief, and Coussinet—had been followed by the formation of vesicles. These vesicles were in every respect similar to those on their right arms.

Four other children were inoculated on their left arms, with the matter taken from the vesicle on the child Denis' left arm, and in their right arms, with the matter from the vesicles on its right arm. Every one of both sets of punctures succeeded; those on the left, as well as those on the right, arms. Two children were inoculated in both arms, in presence of the vaccination committee, with the matter from the left arm vesicles only of Dubief and Coussinet; the wish of the committee being to discover the effects of the *new* lymph when inserted alone, and without the simultaneous insertion of the ordinary lymph.

Every one of these inoculations also succeeded perfectly.* Indeed the vesicles induced by the *new* lymph were altogether finer and more perfect—being larger, more depressed in their centres, of a more silvery hue, and more firm—than those induced by the *old* or ordinary lymph.

* This is a delightful village, situated upon an eminence on the banks of the Seine, about a league from Paris. There is a fine view of the Bois de Boulogne, and of the west end of Paris from it. It is noted, also, for its fine healthful air, and for some mineral springs, which have been long esteemed by invalids.

* The reader may be surprised at first, that so few of the punctures in the first series of cases—three only out of 24—succeeded, and that in the subsequent experiments every puncture should take.

This difference is quite what might have been expected, *a priori*. The matter obtained from the woman Fleury's hands was far advanced; it had become

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The surrounding inflammation, too, was more severe and extensive, and the crusts were larger, thicker, and continued to adhere longer, than after ordinary vaccination. In some of the cases the areolar inflammation extended up the arm to the axilla, causing the glands there to become swollen and painful; and when the crusts fell off, the surface was found to be deeply ulcerated.

Jenner in his early experiments frequently met with the same occurrences; and hence he was often unwilling to make more than one puncture in each arm. M. Bousquet also found it necessary not to make more than two or three punctures with the *new* lymph; as the subsequent inflammation was sometimes apt to run too high.

So much for the external appearances of the vesicles produced by the *new* virus. It remained now to ascertain, whether the constitution of the children had been so affected by its operation, as to resist the influence of the variolous poison. There were two methods of ascertaining this; either by the direct inoculation of variolous matter into the arm, or by vaccinating with ordinary fresh vaccine lymph. The former test was no doubt the more decisive of the two; but there were difficulties to be overcome in using it. M. Bousquet therefore first tried the effects of re-vaccination on twelve children. In all of them the operation failed: there followed only a slight degree of inflammation around the punctures, but no vesicles were formed. M. B. then inoculated two children, who had been vaccinated with the *new* lymph, with small-pox matter; and still no effect was produced.

Since these experiments were made, M. B. has used the *new* lymph in several hundred cases, and with an almost uniform success. He has found, that he has much less often failed with the new lymph than with that in ordinary use.

He has also tried to re-vaccinate with the *new* lymph several persons who had, at former periods of their lives been vaccinated; and in a number of cases he has succeeded in producing perfect cow-pox vesicles. M. Boucher of Versailles re-vaccinated twelve persons, all of whom bore distinct marks of previous vaccination; and to render the experiment more instructive, he inserted the *new* lymph into the left arms, and the lymph in ordinary use in the right arms of his patients. The result was, that "le nouveau vaccine a produit de superbes pustules vaccinales sur toutes les personnes sans exception, et en nombre egal à celui des piqures; tandis que l'ancien vaccin n'a produit qu'une fausse vaccine, lorsqu'il n'est pas sur le champ et sans donner le moindre signe de reaction."

M. Bousquet, having thus indisputably proved the excellence of the *new* virus, proceeds to compare the vesicles produced by its inoculation with those described and figured in the early days of vaccination, and he finds a very remarkable resemblance between them. In both, the process of maturation has been slower, the surrounding inflammation more severe and diffused, and the falling off of the crusts more tardy, than in the ordinary vaccine vesicles seen now-a-days.

In conclusion, we may state that the cow, from which the woman Fleury was infected, was thin, and black, six or seven years old, and had calved six weeks before the appearance of any eruption on the udder. For two days, it would not eat any food, and the secretion of milk was greatly diminished. Several crusts were still on the udder, when M. Bousquet went to Passy. He requested that they might be preserved and sent to him, when they became detached; but his request was not attended to.—*Memoires de l'Academie Royale de Paris*, 1836.

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nearly quite purulent; whereas the lymph employed in the second set of cases was taken on the seventh day after the vaccination. The older the lymph, the less active it is, the greater is the chance of failure with it, and the more necessary, therefore, it is to make numerous punctures. Two or three punctures are sufficient when we use early lymph, whereas ten or a dozen should be made, when the lymph is taken at a late date. Medical men are not sufficiently aware of this circumstance.

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CASE OF GLANDERS.

A middle aged robust man, who had been occupied with the care of some glandered horses in the Royal Veterinary College at Berlin, sickened on the 4th of October, but was not confined to his bed until the 9th. He was seized with frequently recurring fits of shivering, and with severe pains in the back and limbs. On the following day, he complained much of pain and sense of tightness in the chest, with difficulty of breathing and with cough, and these symptoms were accompanied with sharp febrile excitement. The thoracic distress became less; but as the fever did not abate, he was admitted into the hospital on the 18th.

He complained greatly of severe pains in the left leg (the inside of which was found to be erysipelatous), in the upper extremities, muscles of the back, and in the parietes of the chest. The disease resembled an attack of rheumatic fever: a warm bath, saline diaphoretics, and a blister to the chest were prescribed. During the night he was delirious: 12 leeches on the temples and cold lotion to the head were directed.

On the morning of the 21st, numerous boils, and dark red patches were observed on different parts of the surface. The largest one, three inches in length, was situated on the right cheek, and from the livid hue of the surface a tendency to gangrene was dreaded. The patient was oppressed and lethargic, the pulse was frequent, small and weak, and the skin was dripping with perspiration,

On the following two days, more furuncles made their appearance: the patient was alternately delirious and comatose. Some of the first crop of boils indicated the formation of matter. Mineral acids and wine were freely administered; but all the worst symptoms of typhus gravior, such as subsultus tendinum, convulsions, picking at the bed-clothes, &c. set in, and the man died on the evening of the 23rd.

Dissection. Some of the boils were found to contain pus; and in the intervals between them, in some parts, were observed numerous solitary pustules, not unlike those produced by vaccination. An incision into the inflamed spot on the left leg discovered an abscess, which contained about five ounces of consistent yellow pus. The apices of both lungs were softened. On the inner surface of the right lobe, there was an abscess. The head was not examined.—*Medicinisch. Jahrbucher.*

We are surprised that the report of the appearances on dissection is so miserably scanty and imperfect. Not only should the viscera have been carefully examined, but the blood and other fluids ought to have been diligently observed and analyzed in such a case. There cannot be a reasonable doubt, that the preceding was an example of genuine, we do not say, exclusive, *humoral* disease.—*Rev.*

EXAMPLE OF SPONTANEOUS COMBUSTION. REMARKS UPON THIS EXTRAORDINARY OCCURRENCE.

An old man 73, and his wife 65, years of age, had both been long immoderately addicted to the use of spirituous drinks. On the 6th of the present month (Sept. 1836) they had indulged in most excessive intoxication; and on the following morning, they were found dead.

M. Delaville, the "Procureur du Roi," invited M. Soly, the narrator of the case, to accompany him to the examination of the bodies.

The house was situated in the Commune de Surville, and about a quarter of a league from the Pont L'Eveque. On entering the room, some pieces of furniture were observed to be thinly covered with a grey coloured soot: it was most apparent on the windows, and on the glasses in the room. There was a strong empyrumatic smell; and on the floor, between a table on which there were some bottles and glasses containing brandy, and the ashes in the fire-place, lay a shapeless carbonized mass, in which four human legs could be recognised.

Two of the limbs were covered with black woollen stockings, and with cloth boots. One of the stockings was partially burnt at its upper part. The portions of the skin, protected by the boots,

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were reddened; the subjacent tissues did not exhibit any unusual appearances. Three inches or so above the knees, the thighs were converted into a black, carbonized, amorphous mass. There were no discoverable traces of the organs of generation, or of the pelvis (with the exception of the superior edge of the left os ilium), or of its contents; save only of the left ovary, which was found enveloped within an oleaginous and fetid charcoaly substance. At the level of the lower lumbar vertebræ, there was a solution of continuity between the upper and lower halves of the body; and the appearance of the parts indicated that this corpse had been laid across the other one below, and that thus the weight of the head and trunk had caused it to fall forwards, and to crack, in two, at the lumbar vertebræ. The two or three vertebræ which had become in consequence exposed to the air, were completely calcined.

The whiteness of these bones contrasted singularly with the dark pitchy mass, into which the thorax and its contents had been converted. The sternum and the greater number of the ribs had been quite destroyed; the blackened vertebral extremities of the first two or three left ribs still adhered to the spine. The cervical vertebræ were calcined, and terminated superiorly in a white, rounded and incinerated mass, which proved to be the cranium. This osseous case was so friable, that, in the attempt to lift it up, it crumbled to pieces; the lower jaw alone, which rested on the floor, retained its form.

Under the remains of this corpse, lay, at a right angle with it, the debris of a second. The left lower extremity was bare, spotted over on its front with vesicles, which contained a reddish coloured serum; posteriorly, along its whole extent, burned and scorched to the very bone. It was almost quite detached from the pelvis, and exuded at the upper part a most fetid oleaginous fluid. The right limb, which, with the knee directed upwards, rested on the ground by the sole of its foot, was nearly in the same condition. On its anterior surface, it was covered with numerous phlyctenæ, some of which were observed on the sole of the foot. The ankle-joint was infiltrated with a dark serosity. The knee-joint was laid open, was of a yellow colour, and quite desiccated. The femur had snapped across two or three inches above the joint. From about this point in both limbs, the thighs were converted into a confused mass of unctuous charcoal. The pelvis and its contents had quite disappeared. Immediately above this point, the two corpses lay, the one across the other. It was not easy to separate the adhesions between them, formed by the slow and stifled combination of the bodies, and of their clothes, at this part. The right lung, and the liver of the under body had been so well protected by the carbonized layers of the clothes, and by the superimposed mass of the other corpse, that they could be readily recognized. They had shrunk to about one half of their usual size; their surfaces were hard, shining, and brittle. When cut across, they exhibited the consistence of firm cheese. The vertebral column and the ribs were reduced to a charcoal of a denser consistence, than that resulting from the combustion of the softer parts. The head was entire, but so besmeared with sooty matter, and so much disfigured, that the features could not be recognized. The projection of the nose, and the hollows of the orbits were sufficiently distinct; but, on the slightest shock, the bones gave way and broke down into numerous pieces. The brain, shrivelled and as hard as a piece of horn, was not larger than a hen's egg; it rested on the foramen magnum of the occipital bone. Of the upper extremities of both bodies, the only remains were a calcined portion, of about three or four inches in length, of one os humeri, and a few of the metacarpal bones: and these were quite incinerated. The whole weight of the debris of the two bodies, (omitting the lower extremities which were much less destroyed than other parts,) did not exceed four pounds. The period of time, during which the combustion had taken place, could not have exceeded twelve or thirteen hours.

The debris, stretched out on the floor which was soiled with a stinking, greasy fluid, were "encadrés" by the following objects. There was a table

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close to the feet, which were the parts furthest removed from the fire; this had escaped uninjured. Near to the two heads was the fire-place, and also a garde-cendre, and a gridiron, which had fallen down under the body of the woman: between the two heads there was a brand of wood still ignited (un tison encore enflammé). On the right side of the bodies, the only object was a single shoe; and on the left, between the lower extremities of the man and the wall, was a chair, which was but very partially scorched.—*Journal des Connois. Medico-Chirurg. Sept.* 1836.

Most of our readers are probably aware, that the recorded cases of spontaneous combustion of human beings have been considered by many intelligent men to be apocryphal; and in truth we cannot be much surprised at this opinion, when we reflect upon the extreme difficulty of burning to ashes recently dead animal matter. But such incredulity in the present day can be founded only on ignorance. The examples which have occurred of late years are too well authenticated to warrant the smallest doubt of the perfect accuracy of the descriptions given.

M. M. Dupuytren and Marc have detailed the history of two cases, which they themselves had an opportunity of examining. Dr. Apjohn of Dublin has published the reports of four cases, which have occurred recently in different parts of Ireland; and there was a case communicated three or four years ago to our cotemporary "The Medical and Surgical Journal," by a Mr. Devonald of London.

There cannot, therefore, be any rational doubts as to the truth of the fact—that human bodies have, in some manner, caught fire, and have partially or almost completely consumed away, leaving no remains but a mass of incinerated grease.

All the subjects of this horrid death have been notorious drunkards; and it is worthy of notice that most of them have been old corpulent women, addicted to intoxication.*

In no case, has the entire body been destroyed. Some portion or portions have remained only scorched; while the rest has been reduced to a heap of ashes, mixed with a black unctuous mass. The parts, which are usually not consumed, are the extremities, especially the hands and feet, and portions of the spine, and of the cranium. It is rare that the furniture of the room, even that in contact with the body, is much damaged. Sometimes, indeed, the bed, chair, &c. near the body, is scorched, but it is seldom or never consumed. In general the clothes, however, of the victim are found destroyed. A thick, greasy, and offensive soot usually covers all the objects around the corpse. In a few cases, the animal body has been found in the very act of combustion. A flickering, blue-coloured flame has been seen to be emitted from it; and we are assured by some writers, that water sprinkled upon the flame has seemed to enliven rather than to extinguish it.

In the majority of the cases on record, the unhappy victim has been seated near to a flame or fire, when the combustion had commenced. It seems therefore probable, that the ignition, so to speak, has not taken place spontaneously, but had been caused by the approach of the person to the fire or candle.

MM. Cat, Kopp, and Marc, however, are of opinion, from the history of certain cases, that the ignition may commence primarily in the animal body itself, without the application or approach of any heated, or burning body. It is well know that many dry vegetable matters, and that some minerals also will of themselves, under certain circumstances, become heated and catch fire. Some chemical mixtures too, we are aware, will occasion an immediate ignition. Thus, when the sulphuric and nitric acids together are added to some essential oils, the whole becomes instantaneously ignited. It is upon these, and similar facts, that the writers last named rest in part their belief, that animal bodies may spontaneously ignite.

The development of the electrical spark on the one hand, and, on the other hand, the imbibition of all tissues

* Of 25 cases collected by Kopp and Lair, 24 have occurred in females.

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of the body with spirituous liquid, especially when, at the same time, there is a quantity of fatty matter in the cellular substance, are the circumstances which some physicians have considered to be sufficient to occasion, and to keep up, the combustion of the human frame.

That alcoholic liquors may be very quickly absorbed into the blood, and thus be diffused through every part of the body, is known to all experienced pathologists. For example: a man took a wager that he could drink an enormous quanty of wine and brandy within a certain time. He did the feat, but killed himself by it. MM. Cuvier and Dumeril examined the body. They were struck with the strong alcoholic exhalation from every part. Again, M. Breschet mentions that he has repeatedly observed the same phenomenon in the bodies of criminals, who have been executed; and he adds this important remark, that fat animal substances are always found to burn away much more quickly and completely, than those which are lean. He has noticed this fact very frequently in the Anatomical Theatres of Paris, when he has wished to get rid of any portions of the bodies in the dissecting-rooms.

M. Marc concludes, from numerous observations, that an animal body may engender and become impregnated with inflammable gaseous matter; and that this may ignite, either on the approach of any lighted body, or by the action of an internal electrical current.

A case recently occurred in the Hôtel Dieu, which may be adduced, as affording some degree of probability to M. Marc's opinion. A man died suddenly in the hospital. The body was not examined for eight days after death: it was much decayed and putrid. The whole of the surface was ephysematous and covered with vesicles, some containing a bloody fluid, others filled with gas. The cavities of the abdomen, thorax, and also the ventricles of the brain, when cut into, emitted a quantity of gas; which, on the approach of a lighted candle, caught fire, and burned with a blueish flame. The gaseous matter is in all probability carburetted hydrogen. It is not improbable that the still more inflammable gas, the phosphuretted hydrogen, may be generated in the animal system. We know that this gas ignites on simple contact with the atmospheric air.

In whatever manner we endeavour to explain the occurrence of spontaneous combustion, there are one or two circumstances which strongly distinguish it from ordinary combustion.—Thus the rapidity, with which the decomposition and destruction of the body occurs, is very remarkable—a few hours are sufficient for this purpose. Again, how are we to account for the flame, which has been described as seen issuing from the body, not being communicated to inflammable substances placed in its vicinity?

As illustrative of many of the preceding remarks, we shall give the particulars of one of the cases narrated by Dr. Apjohn.

"A woman of about sixty years of age, who lived with her brother in the County of Down, retired one evening to bed with her daughter; both being, as was their constant habit, in a state of intoxication. A little before day, some members of the family were awakened by an extremely offensive smoke, which pervaded their apartment; and on going into the chamber, where the old woman and her daughter slept, they found the smoke to proceed from the body of the former, which appeared to be burning with an internal fire. It was as black as coal, and the smoke issued from every part of it. The combustion having been arrested, which was effected with difficulty, although there was no flame, life was found completely extinct. While the body was being removed into the coffin, which was done as soon as possible, it was dropping in pieces. Her daughter, who slept in the same bed, sustained no injury; nor did the combustion extend to the bed, or bed-clothes, which exhibited no other traces of fire, than the stains produced by the smoke.—According to the testimony of one of the relatives, there was no fire whatever in the room.

The subject of this case had been grossly intemperate for several days before her decease."

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SIGNOR CATANOSO'S CASE OF LIGATURE OF THE SUBCLAVIAN ARTERY, BELOW THE CLAVICLE.

A middle-aged man was admitted in Sept. 1835 into the hospital at Messina, with an extensive and deep cut in the axilla, which he had received three days before. He had fallen from a tree, and a sharp stump of a branch had penetrated deep into the armpit. The wound bled copiously at first, but had ceased spontaneously. The hæmorrhage had recurred several times. It was not suspected on the patient's admission, that the axillary artery had been wounded.* The compresses, however, which had been applied over the wound, were continually wet with the oozing blood; and when some clots were removed, there was exposed a tolerably deep excavation, which had already begun to suppurate. On the 14th day after the accident, an alarming hæmorrhage took place, and Signor Catanoso determined to put a ligature round the subclavian artery below the clavicle. A semicircular incision, pointing downwards, was made through the integuments, and the pectoral muscle having been then divided along the same line, the operator arrived at a tough inextricable fibro-cellular tissue, loaded with fat. This part of the dissection required great care, and occupied a long time. At length, the superior edge of the pectoralis minor muscle was reached, and the pulsations of the artery were felt. It was surrounded with its large accompanying vein, and the axillary plexus of nerves. These were at length separated from it with no small difficulty, and the aneurism needle, provided with one small but strong thread, was passed round it. When the ligature was tied, its two ends were cut off. The wound was then dressed simply, and the arm confined to the side. The pulse in the brachial artery at this time was not to be felt. At first, the wound appeared to be disposed to heal by the first intention; but in the course of two or three days it began to suppurate, and discharged a quantity of sanious offensive pus, mingled with some coagula of blood. The wound required to be enlarged to give a free issue to the discharge, and compresses and bandages were applied over every part, where the pus was disposed to collect. By the diligent use of these means, the state of the patient improved considerably, until the 19th day after the operation, when an arterial hæmorrhage took place. The clots being removed, the spot, whence the blood proceeded, was filled with the styptic powder of Bonafoux, (composed of colophony, charcoal, and gum arabic,) and compresses of lint were then secured over it, by means of a bandage applied tightly round the shoulder.—Fortunately the hæmorrhage did not return, and the wound slowly healed up. The cicatrisation was not however complete for nearly four months.

Signor Catanoso has appended to the report of the preceding case a long and very elaborate memoir on the ligature of wounded arteries, and on the best method of securing the subclavian. We are much pleased to find that his views on all practical points entirely coincide with the opinions and practice of the best English surgeons. He seems to be well acquainted with some of the works of our most esteemed authors, as Hodgson, Cooper, Jones, and others. The operation of tying the artery below the clavicle is seldom attempted in the present day; the extreme difficulty of reaching the artery, and the circumstance of its being quite enveloped with large nerves and veins, are powerful objections to this method. It is much easier to reach the artery above the clavicle. Whether the secondary hæmorrhage in the preceding case came from the tied trunk, or from some smaller vessel, is uncertain. We think the latter supposition the more probable, seeing that the bleeding ceased by the use of the styptic powder and of compresses.

The pamphlet, from which we have drawn the preceding short account, was published last year at Messina. We return our best thanks to Signor Catanoso for having transmitted us a copy, and invite him to send us occasionally such Italian works, as he may wish to be made known in this country.

* It is not stated in the report what was the state of the pulse at the wrist at this time.

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Cholera at Naples.

Dr. Zarlenga of Naples, Editor of the Italian Medical Journal called "Il Severino," has addressed to his distinguished countryman Assalini a letter, in which he has developed his views respecting the nature or proximate cause of the cholera—that singular scourge, which after having visited all the Northern countries of Europe three years ago, and then crossing the Atlantic Ocean, and inflicting its pestilence on the shores of America, has within the last twelve months wheeled back in its career, and asserted its dominion over the fair lands of Italy and Spain.

Dr. Zarlenga has politely sent his letter to our care, to be presented to the Medico-Chirurgical Society of London.

At the date of its subscription, September 1836, the author had not had any opportunities of witnessing* the disease, but he had carefully studied the descriptions given of it by the various authors of different countries, and he has drawn his conclusions from an impartial and minute examination of these.

He takes a rapid review of its first appearance, as a wide-spread epidemic, in Bengal in the year 1817, of its gradual diffusion over Hindostan, Persia, and other countries of Asia, and of its subsequent march Westward over Europe.

After noticing the symptoms of the disease, and the morbid appearances found on dissection in the bodies of those who have fallen victims to it, he proposes the interesting question,—what is the primary cause of the malady?

Dr. Zarlenga professes himself to be a disciple of the humoral pathology on this occasion. He believes that the disease is produced by the introduction from without into the circulation of some poisonous agent, which changes and corrupts the state of the blood; and with considerable ingenuity our author explains by this doctrine the very singular phenomena which so strikingly distinguish cholera from every other pestilence.

It is but fair to give the author's opinions on this subject in his own words.

"Talibus cadavericis observationibus innixus, hujusmodi morbi pathologicam conditionem in sanguine insitam fuisse censeo, cujus crasis per aerem inspiratum peculiarem conditionem nimis labefactam, maximeque turbatam hunc fluidum minus aptum ad vitam reddit; ita ut, super nervos ac fibras morbosam actionem dein explicans, talia causantur symptomata quæ nuper descripsimus, choleramque efficit. Hac crasi corrupta fit, ut sanguinis serosa pars e cruore disjungatur, ac ad tubum gastricum congregetur; ex quo evenit, ut materia serosa continuo vomatur aut per alvum ejiciatur, dummodo membranæ serosæ, atque vesica urinaria liquore omnino carens exarescit." By the aid of this hypothesis Dr. Zarlenga is of opinion that he can give a rational explanation of the leading pathological changes which are found during life and after death in cases of cholera—as, for example, the tarry uncoagulable state of the blood, the gorged state of the viscera, the blueish discoloration and livid spots on the skin, &c. &c. He traces an analogy between this new scourge of the nineteenth century and various other epidemic or endemic pestilences which have been long known, as the plague and yellow fever; and he suggests that the cause of each and all of them is to be sought for in certain morbific changes of the blood, induced by the absorption of some atmospheric poison into the system.

As to the alleged contagiousness of cholera, Dr. Zarlenga confesses that, from all that he has read, he is not inclined to believe in it.

With respect to the treatment suggested by Dr. Zarlenga, it is unnecessary for us to allude to it, as he had

* Since that period the cholera has not spared Naples and its vicinity. By the public prints we observe that it has caused great alarm, and not a little devastation, among the laughter-loving people of that gayest of cities.

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not had an opportunity of testing its efficiency in actual practice.

No doubt, ere this time, Dr. Z. has seen the disease which he has so clearly described, and has tried those remedies, which he was induced, by reasoning on its probable causes, to recommend.

It will always give us the greatest pleasure to be the means of introducing Dr. Zarlenga to the attention of the British medical public, and we therefore invite him, and all our professional brethren in Italy, to forward any recent publications to our care.

ABSTRACT OF M. CHOMEL'S CLINIQUE AT THE HÔTEL DIEU.—FEVERS, CONTINUED AND INTERMITTENT—EXANTHEMATA — PLEURITIS AND PNEUMONIA — FATAL CASES OF ACUTE RHEUMATISM, AND POST-MORTEM APPEARANCES — CONNEXION OF CEREBRAL WITH PULMONIC DISEASE.

The Report embraces the period between November 1st, 1835, to August 1st, 1836. Four hundred and one patients were admitted during this time.

Of typhoid fever, there were 47 cases; and of these 13 proved fatal. Thirty-two of the patients were males, and 15 females. In 45, the age varied from 15 to 35; and in the remaining two, it was above 40. In general it was remarked, that the older the patient was, the more severe were the symptoms. The same observation has been made in preceding years. As respects the season of the year, 26 of the cases were admitted during the Winter, and 21 during the Summer months.

Not one of the 47 patients was a native of Paris: 26 of them had not been a whole year resident there. The mortality is in general greater among the new comers, than among the old residents.

In only one case, was there good ground for suspecting the origin of the fever in contagion. In 12 cases, the fever assumed a decidedly ataxic character: eight of these proved fatal.

In the remaining 35 cases, the adynamic form predominated; but with varying intensity in different patients.

As regards the diagnosis, the pathognomic characters were distinct in 40, at least, of the cases. In all these, there was an intense febrile action,* prostration of strength, headache, stupor and delirium; the tongue was dry, or gluey; the thirst great; the abdomen distended (meteorisé) and gurgling on pressure; and the bowels more or less relaxed. In most of the cases, there were red discoloured patches observable on some part of the surface, and a sibilant rale was heard on ausculting the chest. Whenever this assemblage of symptoms was present in a person, who was not affected with any phlegmasia of the head, chest, or venous system, there could be no doubt as to the nature of the case.

Pneumonia, indeed, and peritonitis, and also phlebitis, do occasionally appear under an ataxic form; but in all such cases the "point de depart" may generally be discovered; not so with genuine typhus.

In the seven other cases, the diagnosis was obscure. Two of these proved fatal; and in one of them, the obscurity was not removed by dissection; no lesion whatever being discovered in any part. In every other fatal case, there was found some lesion of the intestinal mucous surface, and generally of the glandulæ Peyeri.

A tendency to hæmorrhage from some part, as from the nose, bowels, and the subdermoid tissue, was present in several of the patients.

The treatment, which M. Chomel adopted, consisted in bleeding once and sometimes twice at the commencement of the disease, and in the use of demulcent drinks, emollient enemata, baths, and poultices to the abdomen. When the adynamic symptoms were "tres-prononcés," he gave Bourdeaux or Malaga wine freely; also quinine

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* It deserves to be noticed, that in two cases, the pulse, instead of being accelerated, was actually lower than in health. In one, it seldom beat oftener than 48 times in the minute.

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and other tonics. This treatment was quite necessary, when the vital powers were very low, the pulse feeble and slow, and the extremities cold. As long as the surface remained warm, and the pulse quiet, M. Chomel dissuades the use of stimulants.

Intermittent Fevers.—The number of cases admitted was 16; of which 13 were of idiopathic or essential, and 3 of symptomatic ague.* The greater number of cases occurred in the Spring and Summer months. In 10, the fever was of the quotidian, and in 3, of the tertian type. In 6 of the cases only, it was found necessary to administer the sulphate of quinine: in the other 7 cases, the disease ceased spontaneously. Hospital physicians are apt to fall into error, as to the medicinal value of certain remedies, from exhibiting them in cases, which might get well, without any physic at all. In the treatment of recent agues, it is judicious to leave the patient alone for two or three days on a regulated diet, before administering any medicines. M. Chomel is of opinion that salicine, digitalis, &c. which are highly praised by some of his brethren in Paris, are quite inefficient in confirmed intermittents. Of the three cases of symptomatic ague, in two of them there was gastro-enteric inflammation, and in the other one, there was a tubercular affection of the lungs.† In all of them the fever was of the quotidian type.

In two or three of the cases of essential intermittent, there was considerable enlargement of the spleen. The best remedy for this complication was found to be the quinine.

Exanthemata.—There were 8 cases of measles admitted: all recovered. The peculiar expectoration—opaque sputa floating in, or mixed with a turbid fluid*—was not so decidedly marked, nor was it so general, as had been remarked in other seasons. The rubeolar catarrh is as different from the common catarrh, as erysipelas of the skin is from the exanthema of measles. In one of the eight cases, there was no eruption of papulæ on the surface, although all the constitutional pathognomic symptoms—the running from the nostrils, the redness and weeping of the eyes, the hoarse resonant cough, and the pyrexia—were present.

Of scarlatina also, there were eight cases. In four only of them, was the peculiar papillated state of the tongue observed.

One patient, in whom the exanthematous disease was complicated with rheumatism, died. On dissection, the redness of the intestinal follicles—a lesion which has been generally observed in former seasons—was not present; but the mucous membrane at different parts "etait parsemée de taches hæmorrhagiques."

There were six cases of variola, and three of varioloid—in none, was there any symptom or occurrence worthy of particular notice.

Of nineteen cases of erysipelas, the phlegmasia affected the face in eighteen. All did well. Thirteen of the cases occurred during the Summer, and only six in the Winter months. In ten of

* This distinction of intermittent fever into essential, and symptomatic, is much insisted on by M. Chomel. In the former, there is no appreciable lesion or local distress, which can be properly regarded as the "point de depart" of the pyrexia; whereas in the latter form, there is an evident disorder of some of the viscera. "Antiperiodic" medicines are suited to the one from the very commencement of the fever, but not to the other set.

† Query.—Was this a case of genuine ague? We suspect not; but rather one of incipient hectic—which in truth is *intermittent* fever. We have oftener than once seen this mistake committed, and much mischief done by the endeavour to cure the supposed ague.—*Rev.*

* The reporter adds: "ce signe est tellement characteristique, qu'il suffirait à lui seul pour fair reconnaitre la rougeole." We much doubt the accuracy of this assertion.—*Rev.*

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the cases, the cutaneous eruption was preceded by a painful swelling of the cervical glands; and M. Chomel, by attending to this circumstance, was sometimes able to predict the invasion of erysipelas. Eight of the patients had previously suffered from repeated attacks of the disease: one said he had had, during his life, at least thirty attacks.

The treatment consisted in bloodletting, purgatives by the mouth, and also in the form of enemata, and in the application of blisters or other revulsives to the lower extremities. In one case, in which the erysipelas was apyretic, bloodletting was not employed.

The phlegmasiæ of the digestive tube —stomatitis, angina, gastritis, and enteritis—did not exhibit any remarkable features. A few cases of dysentery were admitted: they were successfully treated with aperients.

There were nine cases of lead colic. Two of these presented certain anomalous characters. In one, the case of a man, who had been for a length of time exposed to the emanations from lead, there was the ordinary constipation, the retraction of the abdomen, the vomiting and the trembling of the limbs; but there was no abdominal pain:—it was an example of "colica pictonum sine colica."

In another case, there was amaurosis and tendency also to epileptic fits, added to the abdominal disease. The man was bled, and blistered on the nape of the neck; and then under the use of active purgatives, he quite recovered his health.

Among the phlegmasiæ of the respiratory organs, there were two well marked examples of the suffocative catarrh, which seem to consist in an intense form of bronchitis, affecting the whole extent of the air tubes in both lungs. One of these occurred in a middle-aged woman, who was admitted into the hospital on the fourth day of the disease. The dyspnœa was intense, the number of inspirations in a minute 44, the pulse was rapid, the face of a purple hue, and the anxiety dreadful. Bleeding and blistering were used, but without avail. She died asphyxiated. On dissection, the whole extent of the bronchial mucous membrane was of a deep red colour, ("une rougeur vineuse de toute la muqueuse qui tapisse les bronches,") and the lungs in certain parts were infiltrated with a bloody serum.

There were 14 cases of pleuritis. Of the four fatal cases the thoracic disease was, in three of them, complicated with meningitis, and in the remaining one, with pulmonary tubercles.

No fewer than 61 cases of pleuropneumonia were treated, and of this number, 14 died—certainly a great mortality; but be it noticed that some of the patients were "agonisans" at the period of their admission into the hospital, (in nine the disease was in the first stage—that of sanguineous engorgement or congestion—in 46, it was in the second stage—that of hepatisation—and in the remaining six, it had passed into the third stage—that of infiltration), and that in others, there was a complication of diseases. In four of the fatal cases, the pneumonia was complicated with meningitis. In eight cases (of which five were fatal), both lungs were inflamed at the same time; in 32, the disease was confined to the right, and in 21 to the left side of the chest. Very nearly the same proportion has been remarked in other clinical sessions.

In 22 of the cases, the upper lobe, or lobes of the lungs were chiefly affected. The danger of the attack was greatly influenced by the age of the patient: old people seldom recover.—With respect to the sex of the patient, 45 of them were males and 16 were females.

The diagnosis was in most cases sufficiently easy. Occasionally when all the rational or general symptoms of the disease—fever, pain in the side, cough, expectoration of rust-coloured sputa, &c. were well marked, the usual stethoscopic signs—dulness on percussion, and the crepitous rattle, and bronchial respiration heard on auscultation—were almost entirely absent. In such cases, the disease was probably seated in the deep parts of the lungs. The crepitant rale was sometimes observed to con-

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tinue for several days, after the first stage of the inflammation had ceased, and even after the re-solution of the disease. The reporter conjectures that when this happens, there has probably succeeded to the state of sanguineous engorgement a slight œdematous affection of the pulmonic tissue, and that the persistence of the crepitation is owing to this cause.

That form of pneumonia, which is apt to occur towards the termination of organic diseases, and to prove very rapidly fatal, was observed several times in the course of the season.

We have already mentioned that in five cases the pneumonia was complicated with meningitis, and that such a complication is of extreme danger: the symptoms being obscure, the patient often delirious, and towards the termination becoming comatose.

In five cases the complicating disease was jaundice; three of these cases proved fatal. On dissection, there was no appreciable lesion of the liver.

With respect to the treatment* of the 61 cases of pneumonia—14 of which proved fatal—it consisted in "saignées, le tartre stibié à haute dose, les vesicatoires, et les bains."

In every case, whatever was the stage or degree of the pneumonia, bleeding from the arm was practised.

One only of the 9 cases, in which the inflammation was in its first stage, proved fatal; both lungs were affected at the same time. Of the 46 patients, in which the disease was in the stage of incipient hepatisation, seven died. The average quantity of blood drawn was two pounds and a half, or nearly three pounds. Every one of the remaining six cases—in which the disease was already in the third stage—proved fatal.

Four of them were complicated with cerebral disease. In all the prognosis was most unfavourable from the first examination; nevertheless "on fit usage des saignées, de l'emetique et des vesicatoires!!" The reporter is candid enough to acknowledge, that in these cases the bleeding appeared to accelerate the death of the patients; "cette influence facheuse des emissions sanguines, meme moderées, (de dix onces à une livre) à été surtout evidente chez les deux malades, qui rejetaient des crachats jus de pruneaux, characteristiques de l'infiltration purulente du poumon, quoique le pouls presentât un certain degré de resistance qui semblait autoriser la phlebotomie."

It appears too that, in these six fatal cases, the tartar emetic in full doses had been given!

(It must be quite unnecessary to make any critical remark on the treatment which we have now mentioned. That any physician should dream of bleeding a patient, in whom pneumonia had advanced to the third stage, that of purulent infiltration, appears to us very wonderful; except indeed he is prompted by the laudable motive of putting a speedy termination to the sick man's sufferings.—*Rev.*)

Among the other thoracic diseases, there were two cases of gangrene of the lungs, twenty cases of phthisis, and four of pulmonary emphysema. Fourteen cases of acute rheumatism were admitted. In four cases only, were the sounds of the heart's action at all irregular. In one of these, occurring in a youth, who had lost four pounds of blood, there was a strong bruit de soufflet, which gradually abated and ceased. But it was doubtful whether this abnormal sound was attributable to any inflammatory affection of the heart, or merely to "une modification du liquide circulatoire" induced by the loss of blood. The latter interpretation is probably the correct one; as the same sound was very distinctly heard in a patient who lay inan adjoining bed, and who was labouring under peripneumonia which proved fatal; he had lost upwards of six pounds of blood, and on dissection, no traces of any disease of the heart were discoverable. In another of the four cases, in which the bruit de soufflet was heard, the patient died from endo-carditis, after having lost eight ounces of blood; all the affected joints were minutely examined

* We earnestly solicit the attention of our readers to this topic, as illustrative of the injudicious practice of even the moderate or "juste-milieu" section of the French school at the present time.—*Rev.*

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on dissection, but not the slightest mark of morbid change was found in any of them. About the same time, a patient in the Hôtel Dieu, labouring under acute rheumatism, died from endocarditis, and in this case also the post mortem examination threw no light on the pathology of the articular disease; "les resultats de l'examen cadaverique ont été egalement nuls relativement au rhumatisme." With respect to the treatment of the rheumatic cases, which occurred during this clinical course of M. Chomel, it was remarked that very copious bloodletting had the effect of retarding the recovery of the patients. —*La Lançette Française.*

In the preceding report on the cases of pulmonic disease, we wish to draw the attention of the reader to the circumstance there stated; that in a considerable proportion of the fatal examples of peripneumonia, there was present a complication of cerebral disease, meningitis. The following observations may be usefully adduced here to illustrate this topic of pathology. They were published some time ago in a Belgian periodical, the Bulletin Medical Belge.

Some writers have of late years alluded to the not infrequent coincidence between affections of the lungs and encysted abscesses or other diseases of the encephalon. Professor Lallemand, in particular has insisted upon this topic, in his valuable work on the brain.

In the Gazette Medicale for September 1835, there is an interesting communication from the pen of Professor Albers of Bonn, containing the history of a case, where two circumscribed abscesses in the right hemisphere of the brain were found in a patient, who had been long affected with pulmonic disease. The following case is in many respects similar.

A soldier was admitted into the military hospital at Louvain, labouring under chronic pneumonia. He was gradually recovering from this disease, when very unexpectedly he was seized with violent convulsions of the right arm. These attacks returned very frequently, and were always accompanied with intense head-ache, and with an almost complete loss of consciousness, during the violence of the fits. On the following day the seizures were still more severe, and they had now extended to the right side of the trunk and to the right lower extremity. Bleeding was tried; but this was quite ineffectual. The actual cautery was then applied to the nape of the neck. This powerful revulsive remedy induced a decided amelioration of the symptoms for a short period; but they returned with aggravated violence, until the parts which had been the seat of the convulsions became affected with paralysis. The tongue was partially paralytic and hence the speech was rendered thick and confused. The patient died on the following day.

Dissection. On removing the calvarium, the inner surface of the dura mater was found at several points to be adhering strongly to the pia mater, which was in a thickened and opaque state. The cerebral substance of the middle lobe (it is not stated whether it was the right or the left) was softened and almost diffluent. At its upper part, an obscure fluctuation was perceptible, and on making an incision there, an encysted abscess, as large as a hen's egg, was laid open. The cyst itself was perfectly organized, and could be readily detached, without being lacerated. Its parietes appeared to be formed of two membranes, the outer of which was "blanchatre, de forme fibreuse," and the inner was softer, smooth on the surface and almost like a mucous membrane. Its contents were of a greenish colour, and of a very fetid odour. A small quantity of serosity was found within the lateral ventricles. The lungs presented numerous adhesions of the two pleuræ to each other. The parenchyma, and especially that of the left lobes, exhibited several nuclei of grey hepatisation.

In a recent number of the Bulletin Clinique de Paris, we find recorded the following case of serious encephalic disease, associated with pneumonia, and which had been unsuspected during the life of the patient. As a remark of general truth, it may be stated that

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all thoracic affections, when associated with symptoms of cerebral disturbance, ought to excite the alarm of the physician.

A middle-aged man, of apparently a sound constitution, was attacked with pneumonia. In addition to the usual symptoms, he suffered from an intense headache. He was bled freely and leeched. (It is to be noticed that this report commences on the sixth day of the illness). The headache was removed, but the chest distress became aggravated. He was again bled and died a few hours afterwards.

Dissection. Both lungs were found extensively diseased, from crude and softened tuberculous deposits, and from hepatization. The pia mater was infiltrated with an opaque fluid, and the two cerebral ventricles contained nearly two ounces of serosity.

Remarks. The reporter of this case observes that the patient seemed to have so sound a constitution, that the presence of tubercles could not have been reasonably predicted. The severe headache, which existed during the first six days of the attack, was no doubt dependent on the sub-acute inflammatory action of the cerebral meninges. The effusion was in all probability very rapid, (as there had been no stupor nor delirium except during the last few hours of life) and may be viewed as the cause of the sudden death.

ILLUSTRATIONS OF THORACIC PATHOLOGY—CONNEXION OF DISEASES OF THE HEART WITH ACUTE RHEUMATISM—CASES OF HYDRO-PERICARDIUM AND EMPYEMA — PIORRY'S SUGGESTION FOR TREATING VOMICÆ.

Fatal Case of Acute Rheumatism—Appearances on Dissection.

The following case will be read with much interest by every physician. It seldom happens that an opportunity of examining the pathological appearances in acute rheumatism presents itself.

A woman, aged 27 years, was admitted on the 21st March, 1836, into the Hôtel Dieu, under the care of M. Chomel, for acute rheumatism, which had lasted for the nine preceding days. The knees, hips, and loins were the parts chiefly affected. At this time there was no thoracic distress. She was bled to the amount of 18 oz. This operation was repeated on the following two days: the severe pains still continued. The knees had become greatly swollen, and the patellæ "sont soulevées par l'épanchement qui s'est formé dans les genoux." [This was probably a mistake. The swelling may have communicated to the finger a sense of fluctuation, although no effusion had taken place into the joint.—*Rev.*] The ankle and wrist-joints also had become severely affected with the rheumatism. She was again bled to thirty oz. At this period of the case, percussion on the præcordial region caused a slight degree of pain; but there was no dull sound elicited. The respiratory murmur was normal every where. The first sound of the heart was accompanied with "un tres leger souffle." The pains in the joints became so severe towards evening, that two grains of opium were administered.

Next day, the 24th, the patient was very weak and pale; the pains were stationary; the blowing bruit, attending the first sound of the heart, was stronger and more diffused. Saignée à 18 oz. The venæsection was repeated to the same amount on the 25th.

The patient became gradually weaker and more exhausted; the pains in the joints were still very severe, and they had now affected the elbows and shoulders; the pulse was rapid, soft, and occasionally intermittent; the number of respirations in a minute varied from 26 to 36; the blowing sound of the heart varied in intensity and also in extent at different times of the day; the respiratory murmur was perceptible over the whole chest, &c. Leeches, blisters, sinapisms, and low diet, constituted the treatment. On the 4th of April, when the patient had been incoherent and delirious during the preceding night, when the pulse was rapid and irregular, and when the number

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of respirations in a minute amounted to 44, thirteen ozs of blood were taken once more from the arm,* in consequence of a troublesome cough having come on, and a sibilant râle being heard over the right side of the chest. On the 9th of April, the day before her death, we are informed that the sounds of the heart were quite normal, that the pulse was 100 and regular, that the respiratory murmur was "un peu faible" in the lower part of the right side, and that the sound on percussion over that part was "un peu obscur;" and that the pains in the joints had ceased. A large blister was applied on the chest. next day the patient sunk, from exhaustion of all the vital powers.†

Dissection. All the joints, which had been affected with rheumatism, were carefully examined. The tumefaction had quite subsided. The synovial membranes were free from any traces of inflammatory blush, and the synovia was in moderate quantities, viscid, semi-transparent, of a yellowish colour, and inodorous. In short, all the component parts of these joints "ne nous offrent aucune altération appreciable ni dans leur consistance, ni dans leur coloration, ni dans leur épaisseur." The pleura throughout was smooth and healthy. A pint of limpid serum, without any albuminous flocculi, was found in the right cavity. There was not any distinct trace of pneumonia, except in the lower third of the right lung, where the pulmonary tissue was dense and apparently impervious to air. The pericardium contained about two table-spoonfuls of a lemon-coloured serosity. The structure of the membrane was healthy throughout, except at one point half an inch square, which was covered with recently-effused lymph. On slitting open the cavities of the heart, the mitral valve exhibited numerous grey granulations, insulated or confluent, and varying in size from a pin's head to a millet-seed, and at one part there was "une veritable fausse membrane," which added considerable thickness to the valve; the chordæ tendineæ were enveloped in a soft, greyish, slightly adherent matter; the aortic valves were dotted with numerous granulations, similar to those on the mitral valve; the tricuspid valve exhibited a few, but seemingly of more recent deposit than those on the other valves.—*Journal Hebdomadaire.*

The preceding history will be read with great interest by the practical, as well as by the pathological physician. Fatal cases of rheumatism are exceedingly rare, and hence we have very few reports of the post-mortem appearances in the affected joints. In the present case, we are told that "l'examen de toutes les articulations n'a fait découvrir dans aucune d'elles le plus leger vestige d'un travail inflammatoire quelconque."

The treatment pursued was, in our opinion, most unwise and improper. Far too much blood was drawn, and the depleting regimen was continued at a time when the patient was ill able to bear it. There is no mention made of the use of mercury, colchicum, &c. Severe acute rheumatism can never be *safely* treated by the mere employment of vigorous depletion. This is a flagrant error in the practice of M. Bouillaud and some other physicians in Paris. We are surprised that M. Chomel should ever adopt it. The pleuritic and pericardial effusion were, we doubt not, the direct effect of exhaustion. We are expressly informed, in the report of the dissection—"l'épanchement sereux semblait être independant de toute phlogose, et ressemblait beaucoup à ces hydropisies pleurales, si fréquentes dans les affections organiques du cœur."

M. Bricheteau, in his recent lectures

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* The reporter describes the appearance of the blood drawn thus:—"couenne n'existe que par places; caillot mou; la serosité forme les ¾ de la masse." In all the former bleedings the blood was buffy; the proportion of serum to crassamentum had gradually increased.

† It deserves notice, that at no period of this case had there been strong palpitations of the heart. M. Bouillaud regards the presence of these as one of the most constant symptoms of pericarditis.

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at the Hôpital Necker, has approved of the practice of repeated bleedings, "coup sur coup," in acute rheumatism, as recommended by M. Bouillaud; but he stated that his confrere has surely exaggerated the frequency of the complication of pericarditis, or of endocarditis, with arthritic inflammation. M. Chomel also is of the same opinion. In his Clinique Medicale, he thus expresses himself. "M. Bouillaud has of late years maintained that pericarditis and endocarditis usually accompany acute rheumatism. This doctrine, although founded, it is alleged, on *facts*, has nevertheless been received with incredulity. In our own practice we have tested the accuracy of this announced pathological law, and have examined by auscultation and percussion all our rheumatic patients, but "deux fois seulement nous n'avons constaté dans le cœur d'autre derangement qu'un bruit anormal." M. Bricheteau very justly adds: "We ought not to forget that copious detractions of blood may of themselves induce the blowing, rasping, or rubbing sounds during the heart's movements, although no inflammation of any of the structures of the heart be present."

Many of the French journals have of late contained cases illustrative of the connexion of inflammation of the heart with acute rheumatism. We have frequently expressed our own sentiments on this subject, and deem it unnecessary to amplify at the present time. We shall therefore point our reader's attention to one only of the best papers, which we have met with in the French journals.

M. Cazaneuve on Endocarditis.

An elaborate memoir on endocarditis by M. Cazaneuve, of the Val de Grace Hospital, will be found in the Gazette Medicale for June 1836. He has minutely traced the literary history of this disease, which has of late excited much attention, from the period of the observations of Baillie and Portal down to the present time.

A striking example of it is related in the 5th vol. of the Edinburgh Medical and Surgical Journal. A young girl was, on the sudden recession of an acute rheumatic attack, seized with great thoracic distress. She died in the course of a few days; and on dissection, the internal surface of the right ventricle was found inflamed, and the tricuspid and mitral valves were coated with coagulable lymph. Kreysig has alluded to the coexistence of endocarditis with pericarditis, and to the frequent occurrence of both these forms in measles and scarlatina;* and M. Broussais in his Examen des Doctrines Med., has most ably pointed out the changes, which this disease is apt to induce in the substance, more especially in the valves of the heart, and has distinctly alluded to the occasional coincidence of inflammation of the lining membrane of the heart—to which he affixed the name of meningo-carditis—with acute rheumatism. Laennec appears to have been unwilling to recognise endocarditis, as one of the diseases of the heart. Bertin and Bouillaud in 1824 treat of it, as an affection "excessivement rare;" M. Andral in 1834 enumerated it as one of the causes of hypertrophy of the heart; M. Littré has treated of it in the Dict. Med. t. 9, and within the last two years M. Bouillaud has written a long treatise on it, in his Traité des Maladies du Cœur." To it we must refer our readers for particulars.†

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* Kreysig very justly remarks that the tendency of the heart to be inflamed in scarlatina and measles accounts for the pulse often retaining its frequency and force in these diseases, when the other symptoms are yielding.

M. Tanchon (Journal Complement. t. 23) and Berard, (Dict. Med. art. Arterite) have alluded to the frequency of apparent inflammation of the lining membrane of the heart and of the aorta in fatal cases of variola.

† M. Bouillaud is certainly one of the most active and industrious physicians of the French metropolis; but

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M. Cazaneuve, himself a disciple of the same school as M. Bouillaud, has detailed the particulars of five cases of alleged (we say "alleged," because the reported post-portem appearances have not quite satisfied us that there was genuine disease of the lining membrane of the heart—*Rev.*) endocarditis, and in not one of these cases had there been pre-existent rheumatism.

RARE CASE OF HYDRO-PNEUMATO-PERICARDIUM.

M. Bricheteau alludes to the greater frequency of heart-diseases among shoemakers than among any other class of artisans. He attributes this circumstance to the awkward and confined position of their bodies, when at work. The chest is necessarily compressed, and prevented from being freely dilated in any direction, either upwards, or from the sternum to the back, while at the same time the pectoral and other thoracic muscles are powerfully exercised. Their abodes too are almost always confined and unwholesome.

The following very interesting case occurred in a shoemaker, 59 years of age. In his youth, the patient had served in the army, and had, several years before, received a severe blow from the pole of a coach on the chest. From the date of this accident he had always experienced some thoracic inconvenience —dyspnœa, palpitations of the heart, &c.—which obliged him to sleep with the head raised high in bed. When the region of the heart was auscultated, M. Bricheteau heard distinctly a bruit of fluctuation, corresponding to each contraction of the heart. There was however no dull sound on percussion. The patient died, and on dissection the pericardium was found enormously distended, partly with a gaseous fluid, and partly with a purulent serum. The surface of the pericardium was lined almost throughout its whole extent with a fibrinous exsudation.

CASE OF EMPYEMA—PARACENTESIS THORACIS—RECOVERY.

The patient, before he came under the care of M. Bricheteau, had been in the Hôpital de la Charité.

Succussion indicated very distinctly that the thorax contained a quantity of fluid, and also of air, which served as a means of transmission to the metallic tinkling sound which was heard. The serous effusion increasing so rapidly, as to threaten the suffocation of the patient, paracentesis thoracis was performed on the 21st of April, and gave issue to a large quantity of limpid serum, with great relief to the dyspnœa, &c. The operation was repeated on the 7th of August, when about 12 ounces of a whitish puriform fluid was discharged. The patient was greatly relieved for several weeks; but the metallic tinkling returned, and succussion again afforded proof of effused fluid, from the fluctuation which was audible. But both these symptoms became gradually less distinct, and the patient seemed to be recovering, when, in the month of December, an abscess formed over the place of the punctures. This was opened, and nearly half a pint of a yellow purulent fluid escaped. It could not be ascertained whether this abscess communicated or not with the cavity of the chest. Again it required opening in the beginning of March, and more pus mixed with coagula of blood was discharged. On introducing a probe, a large cyst was discovered. It was supposed that this cyst communicated with the chest, as the jet of the discharge appeared to be increased,

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he belongs to the "extreme gauche" party, *i. e.* the radical reformers in the medical republic of the present day. All his doctrines, and much of his practice too, is carried to a most extravagant "outrance." His opinions, as to the extreme frequency of endocarditis, and the necessity of "saignées formulées, ou coup sur coup," in inflammatory diseases, savours too much of the Sangrado school to meet with general adoption, at least in this country. —*Rev.*

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whenever the patient coughed or inspired deeply.

Whether this supposition was correct or not, the progress of this curious case has been very satisfactory. The discharge has gradually ceased, the abscess healed up, the sounds of fluctuation and metallic tinkling are no longer perceptible, and we have reason to hope that the recovery will be permanent. The respiratory murmur however, and the sound elicited by the percussion of the right side are still much duller than in health.

Compression of the Thorax recommended in the Treatment of Pulmonary Vomicæ.—Rarity of Phthisis among Coal-Miners.

M. Piorry, so favourably known by his works on thoracic diseases, acquaints us that, for several years past, he has been in the habit of compressing the chest in cases of excavations in the lungs, with the view of inducing a contraction and agglutination of their parietes.—That tubercular cavities do sometimes heal and become obliterated, cannot be denied by any pathologist, and that in such cases the part of the thoracic walls situated over such cavities usually becomes flattened and contracted, was asserted by Laennec, and has been verified by others; but that these fortunate changes should be effected, or even promoted by compressing the thorax, by means of graduated compresses over the suspected excavation, and of a belt or roller, appears to us *(Rev.)* to be of more than doubtful propriety. Are pulmonary vomicæ usually solitary? Certainly not. And even supposing that we could obtain the agglutination of one or of several of them, be it remembered that this alone will not be a cure of pulmonary consumption. It is a great error to regard this most formidable disease, as a mere malady of one part—the lungs. Those who have studied Louis' pathological researches, and who have read Dr. Clark's excellent Treatise, need not be told how widely diffused are the morbid changes throughout the system, when consumption has reached the stage of pulmonary excavation.

The treatment suggested by M. Piorry is founded on an erroneous and most hurtful doctrine—that the disease is a local one. He reports the histories of five or six cases, in which, having detected the existence of cavities in the lungs, he used compression of the chest; but, as might be expected, the remedy did not produce decided good in any of them. He talks, indeed, of "une amelioration marquée" in some of the cases; but such a vague account will not satisfy any rational physician.

With even more than a Frenchman's accustomed vanity, M. Piorry seems to anticipate important results from his proposed remedy, and with most philosophic bashfulness disclaims any personal merit; "parceque le succes devra etre attribué point à un medecin isolé, mais à la marche generale de l'esprit humain."

Should any of our readers wish to know more of our author's memoir, they will find it in the Bulletin Clinique for last May.

Dr. Valat, in a series of elaborate memoirs, published in the Revue Medicale, alludes to the great rarity of tuberculous diseases among the coal-miners at Decise in the department of the Nievre, where he has resided for many years. He has not met with one case of genuine tuberculous consumption, cases of which are so rife in all the hospitals of Paris, Lyons, and Montpelier; and yet pleurisies and pneumonias are by no means unfrequent. The observations of some English medical writers agree so far with those of Dr. V. that phthisis is certainly not a common disease among coal-miners. That they should be entirely exempt from it, we cannot expect.

On the Pneumonia of old People. MM. Hourmann and Dechambre.

The following remarks on this important topic have been derived from a very

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extended series of observations, made chiefly in the practice at the great Hospice of the Salpetriere in which there are usually two or three thousand poor old women. MM. Hourmann and Dechambre have paid particular attention to the etiology of this affection, and the results of their enquiries are alike interesting and instructive.

The chief predisposing cause to the pneumonia in question is unquestionably to be found in the almost habitual bronchorrhea to which old people are subject. The mucous membrane of the bronchi is in a relaxed and weakened state; the secretion from its surface becomes more copious as we advance in life, and this indicates a tendency to congestion of its capillary vessels; the membrane itself is less sensitive, and the submucous muscular or fibrous tissue is less irritable than it was wont to be; the cartilaginous rings of the air tubes are more unyielding—all these circumstances operating together must predispose the lungs to be readily affected by atmospheric changes, and will account for the extreme obstinacy and frequent danger of such affections in old age. But there are other conditions of the system at this period of life, which act in a similar manner. Such for example is the frequency of heart diseases, and the narrowing of the thoracic cavity in consequence of the enlargement of some of the abdominal viscera.

Considering, therefore, the influence of these predisposing causes, it is not to be wondered at that pneumonic disease is of great frequency, and of most tedious obstinacy in old age; and the circumstance of both lungs being so much oftener affected simultaneously in aged people than in those of earlier life can only be explained on the plea, that both lobes have undergone certain unfavourable changes, by which they are more predisposed, than formerly, to be affected by morbid influences.

Of the occasional or existing causes of pneumonia in old people, by far the most frequent is the variableness of the weather. The influence of atmospheric conditions is well illustrated by the following table.

Of 156 cases observed in the Salpetriere during the course of one year,

17	occurred in	January	— 6	deaths
19	———	February	— 14	—
31	———	March	— 20	—
20	———	April	— 9	—
11	———	May	— 3	—
6	———	June	— 4	—
3	———	July	— 2	—
*1	———	August	— 1	—
1	———	September	— 0	—
5	———	October	— 4	—
19	———	November	— 15	—
23	———	December	— 10	—

As a remark of very general truth, it may be stated, that the variableness of the weather is much more apt to induce pneumonia and bronchitis, than mere severity of the cold.

From the preceding table, it appears that the months of March and April are on the whole most unfavourable. The pernicious influence of sharp cutting winds has been noticed by all statistical writers. Hippocrates alludes to the frequency of chest disorders during the blowing of North-East winds. MM. Hourmann and Dechambre, confirm the truth of this observation.

"Ce que nous pouvons assurer relativement à nos vieillards, c'est que dans le cours des deux premieres années, et cette année meme (1836), au mois de Mars et Avril, pendant tout le temps (douze jours en 1834), qu'une augmentation considerable eut lieu dans le nombre des pneumonies, la fleche placée sur l'eglise de la Salpetriere a pris la direction du Nord-Est et s'y est maintenue invariablement. Nous avons dit qu' à cette epoque aussi la temperature etait abaissée et soumise à des variations."

The influence of long decubitus in bed ought certainly to be enumerated among, if not the inducing, at least the predisposing causes of pneumonia in

* During the months of August and September the cases were not so regularly registered as during the other months. There may have been therefore admitted two or three cases more, than we have details of.

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old people. Hitherto the influence of this circumstance has not been sufficiently attended to by medical enquirers. That the statis of the blood, in those parts of organs which are kept for a length of time in one position, has a tendency to induce, or at least to favor the accession of a troublesome sort of inflammatory action, is strikingly illustrated in the case of old people, who have been long bed-ridden.

From the researches of M. M. Hourmann and Dechambre, it appears that the posterior and inferior parts of the pulmonary lobes are much more commonly affected with *intervesicular* pneumonia than the anterior and upper parts; that *vesicular* pneumonia is more frequent in the anterior than in the posterior edges of the pulmonary lobes; and that pneumonia of the superior lobes has in most cases its seat all around the fissure, which separates them from the middle lobes, and pneumonia of the lower lobes is very generally seated in their posterior parts. This predilection of pneumonia for those parts which are most "declives" can be fairly attributed only to the mechanical accumulation of the blood.

Our authors state also that pneumonia of the lower lobes is much more frequent on the right than on the left side, and account for this by saying that most bed-ridden people usually lie most on the former side.

The influence of prolonged decubitus in determining the seat of pneumonia in old people has been much insisted upon and very ingeniously discussed by M. Piorry in his memoir on what he calls "pneumonic hypostatique."*

To sum up in a few words the doctrines of M. M. Hourmann and Dechambre on the etiology of senile pneumonia, it may be stated, that some of the causes, as for example weakness of the system, and tendency to chronic

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* There is a notice of M. Piorry's memoir in the number of this Review for July 1833. As the subject is but little known, we shall make one or two extracts from it. "It is well known to anatomists, that the posterior parts of the lungs are almost always found on dissection to have a deep purple venous colour, while the fore-parts of the lobes are pale and speckled. This appearance of congestion is correctly attributed to the subsidence of the blood after death towards the most depending parts, and constitutes the "engouement cadaverique" of the French pathologists. Now M. Piorry is of opinion that in enfeebled states of the system, especially in aged people, a tendency to the the same subsidence may take place during life, when the patients are long confined to the horizontal posture, and may thus, if it does not actually prove an exciting cause, at least must aggravate any inflammatory affection of the lungs. Eight illustrative cases are adduced; they occurred in old people admitted into the Salpetriere as objects of charity.

Professor Boyer long ago remarked that it was most injudicious to confine old people for any great length of time to bed; and even, when it is absolutely necessary, as after fractures, or other severe injuries, they should be told to sit up occasionally in bed, in order to prevent the congestion of blood, not only in the skin of the back, but also in the depending parts of the internal viscera." p. 212.

The following notice of the sentiments of another estimable French physician may be appropriately introduced here.

M. Bricheteau has of late met with several cases of fatal pneumonia, characterised on dissection by a ramollissement of the pulmonary tissue, which he calls "splenification," from its resemblance to softened spleen. In all the cases, there had been a considerable impediment to the free circulation of blood through the lungs, in consequence generally of an associated heart disease. The tissue had become as it were soaked with blood, and so much softened, that it was easily lacerable, and reducible into a soft pap on pressure.

This sort of pneumonia is much more frequently met with in the old and enfeebled, than in younger patients; and is generally associated with disease of the left side of the heart.

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catarrh, operate on all the patients; that other causes, as diseases of the heart, are present in a large number; and lastly that those patients, who are bed-ridden, are on the whole more susceptible of being affected by atmospheric vicissitudes, than those who are able to be moving about.

The accession of senile pneumonia may take place in two very distinct forms. It is either sudden, setting in with a chill, pain of the side, as is ordinarily the case in young subjects; or it may creep on insidiously, and establish itself, before its existence has been suspected, and without the presence of any well marked symptoms. At the Salpetriere, senile pneumonia assumes almost always the first of these fevers during the months of March and April. The shivering and the attack of pain are often preceded for several days by headache, general languor, coryza with or without epistaxis, flying pains in the limbs, &c. and the pneumonia being once fairly established, the patients soon fall into a state of stupor and adynamia.

In the second mode of attack, there is neither shivering, nor any pain in the side at first: the patient only feels ill at ease, and altogether more feeble than before; the breathing is hurried and sometimes irregular; there is a paroxysmal cough, accompanied with difficulty in expectorating the phlegm, the skin is warm, and the tongue is dry. Such are often the premonitory symptoms of pneumonia in old people. But even these, now enumerated, are not always present. There may be neither cough, nor any disturbance of the breathing, even although the patient had been, before the attack, subject to an asthma, or chronic catarrh, and the only symptoms may be a general malaise and feebleness. This most unexpected occurrence has been repeatedly noticed by M. M. Hourmann and Dechambre, and from its very singularity, it becomes a valuable symptom to the experienced practitioner. In reference to the dyspnœa, our authors very properly inculcate on their readers the propriety of not trusting to the mere accounts of the patient. The physician ought to examine the breathing for himself, to count the number of respirations, to percuss the chest, and to ascertain the sounds elicited on auscultation. With all the assistance to be derived even from these means of exploration, it is occasionally not easy to form an accurate diagnosis of the case, and to prognosticate its probable result. Take for example such a case as the following. One of the old inmates of the Salpetriere rises at her usual hour, makes her own bed, eats her food as usual and moves about the ward; in the course of the day she feels fatigued and exhausted, lays down on her bed, and, after a short struggle of difficulty in breathing, expires. "C'est la une des *morts* dites *subites* de vieillesse à la Salpetriere." On dissection, the physician is much surprised to find a large portion of the pulmonary parenchyma in a state of suppuration. Some very remarkable cases of this description have been observed by M. M. Hourmann and Dechambre in old women admitted into the Infirmary of the Salpetriere for other diseases. For example, a poor Vieille, 85 years old, had been admitted a few days before for a stomach complaint: she was quite gay and cheerful, and to shew her good appetite to the doctors, she eat a piece of hard biscuit in their presence.

The visit of the infirmary was not over, when one of the nurses came to inform them that their old patient was dying. They arrived just in time to see her expire; some of the biscuit crumbs still hung around her mouth. On dissection, the entire substance of the lower lobe of the right lung was found in a state of free suppuration. M. Falret mentioned a similar case to the authors. An old insane woman, remarkable for her habitual loquacity and strength of voice, very suddenly fell down and died in the course of an hour or so. The whole extent of the right lung was found in a state of grey hepatisation.

A very important conclusion, which M.M. Hourmann and Dechambre have deduced from their researches, is, that senile pneumonia very generally commences and advances in an obscure latent form, when there is co-existent

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cardiac or cephalic disease—very common complications—and that on the other hand the attack is usually sudden and acute, in persons who are free from such diseases.

The *symptomatology* of senile pneumonia may be, in part at least, inferred from the preceding remark. The pain is seldom sharp or severe; and this is often the case, even when the corresponding portion of the pleura is inflamed at the same time. The patient complains of a mere sense of soreness or uneasiness over the entire affected side. In those cases, in which the disease commenced with a stitch, this seldom lasts above two or three days, and then it is replaced by a diffused obtuse pain. The dyspnœa is often quite as unsatisfactory a symptom as the local pain. The breathing may be not at all embarrassed; usually it is accelerated; but in some cases it is even slower than usual. It has been observed by our authors, that the dyspnœa is always much less severe when the disease affects chiefly the lower lobes. When the upper lobe or lobes are inflamed, the breathing is almost invariably much distressed, and often constant orthopnœa is present. Occasionally however the inflammation of the upper lobes commences in a latent form, and all the symptoms remain, throughout, obscure and indistinct.

What we have said of the pain and dyspnœa, may be extended to the cough, as one of the symptoms of senile pneumonia. It is sometimes so inconsiderable, that the patient scarcely is aware of its presence.

He has perhaps only two or three fits in the course of the day; and these are apt to come on, only when he makes any exertion, or changes the temperature in which he is in. The expectoration also in not a few examples affords no evidence of the existing disease.

We have already remarked that M.M. Hourmann and Dechambre have repeatedly observed that in those cases, where the patients had been subject to a chronic catarrh before the accession of the pneumonia, the expectoration often ceases altogether.

With respect to the auscultatory symptoms of senile pneumonia, they are not, on the whole, so distinct and satisfactory as in the pneumonia of younger people. The genuine râle crepitant is rarely to be heard; mucous and sonorous râles are the predominating sounds. Sometimes the râle has an unusually dry resonance, and resembles the crackling of parchment rubbed between the fingers. The respiratory bruit is almost always more or less bronchial in the neighbourhood of the affected parts. The complete extinction of the respiration over the parts themselves is a much more rare occurrence in the old, than in the young and middle-aged, affected with pneumonia.

It particularly deserves to be noticed that, in some cases of senile pneumonia, auscultation affords no evidence of its existence. The words of our authors are:—"Nous avons vu des pneumonies, chez nos vieillarde, traverser toutes leurs periodes, sans donner lieu à aucun râle. Alors ou bien l'on n'entendait rien, ou bien le bruit respiratoire etait tres fort et pure. Nous avons recueilli un fait de ce genre, meme dans un cas de pneumonie de tout le lobe superieur droit, et l'auscultation a été pratiquée jusqu'à l'instant de la mort."

During the progress of senile pneumonia, the functions of the cerebrum are very generally disturbed; the patient becomes delirious, and the delirium lapses more or less speedily into coma. The period, at which the mental disturbance usually commences, is when the process of suppuration is about to be established; sometimes, however, the invasion is much earlier. In the greater number of cases, there is no delirium nor coma; but only decay and hebetude of all the intellect and moral powers. Without being positively irrational, the patients appear to be quite lost; they do not understand what is said to them; their answers have, perhaps, no reference to the questions put, and they remain taciturn and take no notice of any thing. In short, they lapse into that condition so emphatically described by Shakespeare as "second childishness and mere oblivion."

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The symptoms afforded by the state of the tongue, of the skin, the bowels, and the urine, are far too uncertain and unsteady to warrant any confidence being placed in them. The pulse itself is apt to misguide us, if we attend too much to its state. That the very essence, if we may so speak, or the proximate cause of the disease in old persons, is different from that of pneumonia in younger subjects, is rendered probable by the circumstance of the blood, when drawn in the former set of cases, being generally without any buffy coat. Of 24 venæsections, practised by MM. Hourmann and Dechambre, the blood was buffy eight times only; and in 23 other cases, the blood was buffy in nine only of them. Of 17 cases, in which the blood was found to be buffy, the invasion of the disease had been acute in 15, and latent in two. Of the 30 cases in which it was not buffy, the invasion had been latent in 11, and acute in 18 of them.

The physical characters of the coagulum are, in general, very different from those exhibited by buffy blood. It is not red and firm, but soft, black, or even of a greenish hue. Sometimes the blood does not form a proper clot, but assumes the consistence of molasses.

MM. Hourmann and Dechambre very properly remind their readers of these facts, when they come to treat of the appropriate remedies for senile pneumonia. Free bloodletting must be practised with great circumspection; the powers of life are easily made prostrate, and if once permitted to be so, there is little hope of re-animating them. They tell us that they have sometimes found it necessary to exhibit wine and other stimulants, at the very time when they were drawing blood. Perhaps, under such circumstances, it would be more judicious to employ local depletions, by cupping, than general evacuations.

Emetics are highly praised by our authors. They have no faith in the contra-stimulant practice of exhibiting large doses of tartar-emetic. Blisters, large and applied directly to the chest, are among the most efficacious remedies: in most cases, they may be used with advantage from the very commencement of the disease. [No allusion is made to the use of expecturants: the judicious use of oxymel of squills, compound tincture of camphor and syrup of poppies, in the form of a mixture, will be found of sovereign benefit in most cases.—REV.]—*Archives Générales de Médécine.*

REMARKS ON INFANTINE ASTHMA, CONNECTED WITH AN ENLARGED STATE OF THE THYMUS GLAND, WITH CASES.

This variety of asthma, which we take to be nearly the same as the "acute asthma" of Millar, and the "spasmodic croup" of Guersent, Michaelis, the "laryngismus stridulus" of Good, Ley, &c. and to which the German writers have given the appellation of "asthma thymicum"—from its presumed cause, the enlargement of the thymus gland—is more common during the first, than during any subsequent year of a child's life. The little patient, who perhaps had been in perfect health the minute before, is suddenly seized with a complete stoppage, or a most painful difficulty, of breathing, and the body and limbs become affected with violent convulsions. If the breathing continues, each act of inspiration and expiration is attended with a whistling or crowing sound, as if the air had to pass through a narrow metallic opening. This frightful state will last for one, two, or three minutes. Sometimes the child recovers from it with a scream, and the breathing resumes its healthy regularity; at other times the recovery is more gradual, and the child remains for a considerable period exhausted and drowsy.

These attacks are apt to return at irregular intervals. They occur most frequently on awaking from sleep, or when the child is fretful or has been crying. In short, any change in the act of respiration predisposes to the coming on of the suffocative paroxysm. At first the attacks are rare; but gradually they become more frequent; and

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in the worst cases, ten and even twenty paroxysms have been known to occur in 24 hours. Often the child dies asphyxiated in the course of a minute or two; or, if it survives this period, convulsions are apt to ensue, and then the death seems to be more of an apoplectic character. Numerous dissections have shewn that, in addition to the post-mortem appearances usually observed in cases of asphyxia, there is almost always an enlarged state of the thymus gland. Sometimes this organ is found so much increased in dimensions, that it has pushed back the lungs, and compressed the trachea and the large blood-vessels at the root of the neck. The structure of the gland is generally healthy, and when cut into, a milky fluid flows out.

The children most liable to this form of asthma are those of a strumous constitution, and the predisposition to it is strongest after attacks of catarrh, croup, hooping-cough, or measles, or, in short, of any disease in which the breathing has been much affected. Dentition also, and all disturbances of the stomach and bowels, are apt to induce it.

The treatment necessarily resolves itself into the management of the suffocative paroxysm, and into the arresting of its disposition to return. Unfortunately, not much can be done during the paroxysm, and we have known many cases where the patients perished on the first attack. The infant should be held up, with its head inclined rather backwards, strong smelling salts should be applied to the nostrils, water sprinkled on the face, and the back well rubbed, and tapped every now and then smartly with the hand.

During the intervals—and it deserves notice that the health of the child often appears to be completely restored, when the paroxysm has ceased—small doses of musk, assafœtida, zinc, especially of the hydrocyanate, in cherry-laurel water, should be diligently administered for a length of time. Occasionally, purgatives also are necessary. Leeches and blisters over the seat of the thymus gland may be advantageously used. M. Fingerhuth, who has published an able memoir on Thymic asthma in Caspar's Wochenschrift for 1835, recommends the employment of iodine baths, and of frictions, over the seat of the thymus gland, with hydriodate of mercury ointment.

Case 1. A child, when five months old, suffered from an attack of bronchitis, which left a tendency to attacks of suffocative asthma, whenever he awoke from sleep. The fits at first were not very severe; but gradually they became more aggravated, so that sometimes the breathing was completely suspended, and then the body was convulsed, stiff, and bent backwards. Each paroxysm, after lasting for one or two minutes, terminated by a fit of shrill, interrupted crying, and the child was soon as cheerful and well as before the attack. In one of these fits, the child died asphyxiated.

On dissection, both lobes of the thymus gland were found to be considerably larger than usual, occupying the whole of the anterior mediastinum; and a middle portion, situated between the two lobes, rested upon, and appeared to compress the common jugular vein. The gland was of a firm consistence, and weighed about ten drachms.

Case 2. A scrofulous child, four months old, had frequent attacks of oppression in breathing, and general disquietude, which were attributed to a disordered stomach, and were treated with emetics. Two months afterwards, when Dr. Hirsch first visited this child, the paroxysms of asthma had increased greatly in frequency and in severity. When the attack was coming on, the child threw his body convulsively back, and made one or two efforts to draw in a breath; and as it began to yield, he made five or six shrill inspirations, which were not followed by expirations; the body lost its spasmodic stiffness; and after a short groaning and crying, he seemed to be almost quite well. Besides these attacks of asthma, this child was frequently seized with general convulsions of the body and limbs; the thumbs were forcibly bent in upon the palms; the whites of the eyes were

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rolled up, and a quantity of frothy saliva collected about the lips. Death took place on the second day after Dr. Hirsch's visit. On dissection, the thymus gland was found much hypertrophied: it extended from the thyroid gland above to the pericardium below, and adhered intimately to the arteria innominata and left carotid arteries.—*Schmidt's Jahrbucher der In-und Auslandisch: Medicin.*

Remarks. It appears to be quite a favorite doctrine among the German, and also, we believe, the Danish physicians, to refer the paroxysmal asthma of infants to a disease of the thymus gland. There is an interesting paper on the anatomy, functions, &c. of this organ in the 17th vol. of this Journal, p. 139, which will repay the reader's studious perusal. We were, we believe, the first to introduce this pathological subject to the notice of the profession in this country.—*Rev.*

ON THE NATURE AND SEAT OF ANGINA PECTORIS.

Dr. Heberden, in 1768, was the first who accurately described this most distressing malady,* and distinguished it from other thoracic affections, of which it had been supposed to be merely an occasional accompaniment.

Since his time, numerous contributions have been made by various authors to the history of its symptoms, causes, and treatment. Very considerable difference of opinion however has prevailed, as to the real nature and seat of the distress; owing, no doubt, to the error so frequently committed by medical men, of attending exclusively to the results of their own observation and experience, without regard to the recorded observation and experience of others, and also of deducing general conclusions from a too limited number of facts, however correctly these facts have been ascertained. The disease is not a very common one; a physician therefore has seldom the opportunity of examining many cases; and moreover the morbid appearances, which have been found in such as have proved fatal, are by no means uniform, or even similar, in all. The characteristic symptom of angina pectoris is a severe pain, felt immediately behind the sternum, and accompanied with a sense of strangling and dreadful constriction of the chest, which prevents the patient from drawing in a deep or easy breath. The pain is usually seated rather more on the left than on the right side, and it generally extends some way up the neck and along the arms, especially the left one, as far as the elbow, or wrist-joints. While the pain lasts, the pulsations of the heart are confused and irregular; sometimes violent and tumultuous; at other times extremely feeble, or even scarcely perceptible; and the patient is threatened with constant syncope: the breathing is hurried, short, and often so imperfect, that the movements of the chest are hardly to be perceived.

The attack of pain, (or, as it has been recently denominated, sternalgia,) is usually sudden and unlooked for; the patient being perhaps seized in a moment, having had little or no warning of its approach. In numerous cases the paroxysm is preceded by derangement of the stomach and bowels, indicated usually by flatulence, acid or unpleasant eructations, constipation, pains in the limbs, amounting sometimes to severe cramps. Bodily exercise, the impression of cold air on the surface, and strong emotions of the mind, are the most common exciting causes; but as the disease advances, the paroxysms sometimes occur even during sleep, or at other times when the patient is perfectly quiet. The attacks are more frequently observed in the evening than at

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* It has been conjectured that the disease of which Seneca died, and which he himself calls "suspirium," was angina pectoris.

It is singular that Cullen has not noticed the disease in his Nosology. He surely must have seen several cases of it in his extensive practice; but may have very possibly mistaken them for asthma, or hydrothorax.

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any other period of the day. This may probably be attributed to the stomach being more liable to be deranged by dinner, than by any other meal. So dreadful is the agony of the pain, that the patient is stricken mute and helpless, and is forced immediately to discontinue whatever he was doing before its seizure. A certain degree of relief is often obtained by pressing the chest against any hard object, or by having an attendant to beat and thump it, and also the back, firmly with his fist. As the fit declines, a quantity of wind is usually discharged from the stomach, and sometimes the other contents of the stomach are rejected by vomiting.

In the early stages of the disease, the attacks usually last only for a few minutes; but as it advances, they become much more lengthened, continuing from half an hour to an hour and upwards. During the intervals, the health of the patient often appears to be quite restored.

Angina pectoris is of much more frequent occurrence in the male, than in the female subject. It is more common between the fiftieth and sixtieth years, than at any other period of life.* Men of sedentary habits, when disposed to corpulency, and to rheumatic or gouty affections, and especially if they have suffered much from mental distress, are those who are chiefly liable to attacks of this disease. Heberden, Macbride, and Darwin, were of opinion that angina pectoris is essentially a spasmodic or nervous disease; and Desportes and Jurine of Geneva referred the spasm to an affection of the pulmonary and cardiac plexuses of nerves. That the disease is, in some measure, truly of a nervous character appears from the suddenness of its attacks, from the short duration of these, from their being very often followed by a state of apparent health, from the influence of mental emotions as an exciting cause, and from the want of uniformity in the necroscopic appearances in fatal cases. But we should commit a grievous error, if we were to suppose that all organic and appreciable lesions of the respiratory and circulatory organs were very generally absent. The paroxysmal character of the disease is not, we must remember, sufficient evidence of its purely spasmodic character; for asthma, and numerous hepatic and nephritic maladies, often exhibit the same feature during the life of the patients, and yet extensive degenerations of structure may be found on dissection. The circumstance too, of females and young people being so much less subject to angina pectoris than middle-aged males, may lead us to suspect the truth of its being of a purely nervous character. With respect to the doctrine of those physicians who refer the disease to an essential lesion of the thoracic, the pulmonary, and cardiac nerves, it is unnecessary to canvass its correctness; as it has not been supported by any pathological proofs.*

* Dr. Copland states that, of nearly one hundred cases, about seventy occurred in persons upwards of fifty years of age; and seventy-nine out of the number were males. It is equally common in persons of a spare as of a full habit.—*Rev.*

* This doctrine, although it is summarily rejected by our author, has been supported by some of the highest authorities on this disease, and appears to us to be, perhaps, the most satisfactory. Laennec was of opinion that angina pectoris is usually dependent upon an affection of the pneumogastric, or of the cardiac, or both sets of nerves. He adds:—"The anterior thoracic nerves, originating in the superficial cervical plexus, are moreover frequently implicated; and this is sometimes further the case with the branches derived from the lumbar and sacral plexuses, when the thigh and leg participate in the attack, which occasionally happens."—Dr. Chapman, in a very able paper published in the seventh volume of the American Journal of Medical Sciences, expresses similar sentiments: "That the disease is a species of neuralgia, I am entirely persuaded, commencing for the most part in the pneumogastric nerve, and spreading in different direc-

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Influenced by the attentive examination of a few cases, several authors of respectability have pronounced that the usual cause of angina pectoris is a metastasis of gouty disease to the heart, lungs, or diaphragm. This opinion, however, is too vague to warrant our unqualified assent; for in a multitude of instances, no gouty disposition can be discovered. Other authors have supposed that angina pectoris is invariably dependent upon some fixed organic disease of the thoracic viscera. Drs. Jenner and Parry have, it is well known, particularly insisted upon the ossification of the coronary arteries of the heart, as the most frequent lesion: but this doctrine is very far from being universally, or perhaps even generally, correct. Various other morbid lesions of the heart, such as hardening of the semilunar and auriculo-ventricular valves, excessive accumulation of fat about the heart, softening and paleness of its substance, &c. have been particularized by Drs. Wall, Fothergill, and a host of occasional writers. It is now generally admitted that, all such organic diseases are only of casual occurrence in cases of angina pectoris; and that, on the other hand, they are not unfrequently discovered after death in the bodies of those, who have not during life suffered from this disease. Many of the Italian physicians have supposed that the most frequent cause of angina is the pressure, which a greatly enlarged liver or other abdominal viscus may exert upon the heart, by inducing a certain degree of paralysis of its muscular texture. But surely this is a most improbable explanation; for, not to allude to the circumstance of the two viscera, (when we talk of the liver and heart,) being situated on opposite sides of the body, may we not enquire how comes it, that angina is so rare a disease, considering the very great frequency of hepatic lesions? The attention of Dr. Gintrac, the author of the present memoir, was first specially directed to the pathology of angina, by a case which he attended in the year 1824. He was particularly struck with the exact seat, in every paroxysm, of the excruciating pain; this he invariably found to be immediately over the rising arch of the aorta. There were not any marked symptoms indicative of an organic disease of the heart, or of the lungs; all the sufferings appearing to be referred to the place, we have mentioned. The circumstance too of the arterial pulsations being strong and regular, taken in connexion with the uniform seat of the pain, led Dr. G. to suspect that, the disease belonged rather to the aorta, than to the heart itself. Numerous other considerations tended to confirm him in the correctness of this opinion. Certain it is that, in most fatal cases of angina some appreciable morbid alteration is discoverable either in the aorta itself, or in its semilunar valves, or in the cardiac arteries, or perhaps in all these parts at the same time; parts, it is to be noticed, all appertaining to the same class of structures. They may therefore be considered as only different portions of one organ; and hence we are led, a priori, to anticipate a similitude in their morbid changes. From a studious investigation of most of the cases on record, as well as from an attentive examination of several cases which have occurred in his own practice, Dr. Gintrac has been led to believe that the primary seat of angina pectoris is always in the aorta itself, or in some of its appendages. The most common lesions are dilatation of its tube, with thickening, and cartilaginous or osseous induration of its structure. In some cases, Dr. Parry and others have noticed visible traces of inflammation on the outer surface of the aorta, and its vasa vasorum have

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tions, as other nerves may become involved. The derangement of the heart and other structures, with which it is sometimes associated, I hold to be coincidences or effects, and not the cause; since, among other reasons which might be adduced in corroboration of it, the disease has undoubtedly prevailed independently of such organic lesions, and conversely these have existed without occasioning it. My conviction is, that the immediate cause of the neuralgia is derived from irregular gout."—*Rev.*

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been found, by other observers, highly injected. In several instances, its lining membrane has been of a deep red colour, and exhibited numerous rugosities, and minute ulcerations scattered here and there. Occasionally these patches of superficial ulceration are of considerable extent. Often the aorta alone is found diseased: but, not unfrequently, its appendages also are similarly affected. Thus its valves may be thickened, warty and ossified, and the coronary arteries may have become cartilaginous or osseous. In the case of the late celebrated John Hunter, and in other examples related by Drs. Fothergill and Parry, the carotid arteries have been discovered to be ossified, along more or less of their extent. This coincidence of disease in the aorta, and in the arteries which are first given off by it, deserves notice; as it shows, that it is in this "ensemble" of parts, connected with each other by a similitude and indeed continuity of formation, that the seat of angina pectoris very generally exists. Although the lesions of the aorta and of its appendages may appear at first sight to be somewhat different from each other, they are all referrible to the same general cause, viz. chronic inflammation. The operation of this diseased action is at once obvious and indisputable, in such cases as exhibit these parts injected, thickened and ulcerated; and M. M. Bertin and Bouillaud have shewn that, dilatation also of the aorta is often primarily dependent on an inflammatory irritation of its parietes.

It may be objected to the doctrine of angina pectoris being the effect of chronic inflammation of the aorta and its appendages, that numerous cases of this disease have been recorded, in which these parts were found on dissection quite exempt from any appreciable morbid change.

Dr. Gintrac replies to this objection that, he does not mean to advance his doctrine as uniformly or exclusively, but only as very generally true; and suggests that, if the cases, apparently contradictory of its truth, be analyzed, we shall find that they are less opposed to his views, than may at first sight be imagined. The state of the lining membrane of the aorta and of its branches has been often overlooked by pathologists.—*Bulletin Medical Belge.*

It appears to us that Dr. Gintrac is much more successful in exposing the errors of others, than in establishing the correctness of his own opinions. We cannot concede to him, that angina pectoris is generally, far less invariably, connected with disease of the aorta or of its appendages. We have already stated that, in numerous cases, it appears to us to be of a strictly neuralgic character. The symptomatology, as well as the therapeutic history, of the disease lead to this conclusion.—*Rev.*

On the Cause of the First Act of Respiration in the New Born Infant.

Prochaska attributed the first respiratory movement of the infant to an instinctive impulse. But instinct is dependent upon the brain; and, in Meckel's work on Pathological Anatomy, we read of a multitude of instances of anencephalic children breathing regularly for a limited time.

Blumenbach refers the first act of respiration to several co-operating agencies; such as, to congestion in the aorta induced by the obstruction of the umbilical arteries, to the danger of strangulation from the interrupted oxygenation of the blood, to the impression of the atmospheric air on the cutaneous surface, &c. All these influences must certainly tend to excite various movements, and more especially those of the dilatation of the thorax, and may thus cause the drawing in of the air to fill up the vacuum. But, apart from the doubts which the first two points may reasonably excite, the theory of Blumenbach supposes, on the part of the infant, a feeling connected with consciousness;—a presumption, which is controverted by the well ascertained fact of anencephalous monsters being capable of respiration. Rudolphi, in his Elements of Physiology, has pro-

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posed the following explanation. The muscles of the face are called into action by the unpleasant or painful impressions, to which the child is exposed during and immediately after delivery; the mouth and nostrils are thus opened and dilated, and the air is involuntarily drawn in. It will be observed that, Rudolphi calls into requisition Sir C. Bell's beautiful theory of the concatenation or associated sympathy of the muscles of the face with those of respiration.

Müller ascribes the breathing of the new-born infant to the stimulus or irritation, which the blood, immediately oxydising itself, or about to be oxidated in the lungs (das in den lungen sogleich sich oxydirende blut), produces on the brain and medulla oblongata.

But to this theory it may be answered, that the air, although by its elasticity it may be admitted into the trachea and its larger branches, cannot well force itself into the pulmonary cells (in which alone the oxidation of the blood is affected), because they are closed and fallen together (zusammengefallen). And moreover, what good reason is there for supposing that the nerves from the medulla oblongata require oxygenized blood to excite them into action; seeing that other nerves, those derived from the spinal marrow, possessed ample activity during intra-uterine life; as is satisfactorily proved by the movements of the body and limbs before birth.

The author seeks for another interpretation, derived in part from the researches of Dr. Marshall Hall on what he has denominated the reflex functions of the nervous system. It is well known that, irritations of all parts, which are invested with mucous membranes, have a tendency to excite the movements of the respiratory apparatus. Irritation of the nostrils induces sneezing; irritation of the throat and stomach induces the efforts of vomiting; irritation of the lower bowels, of the bladder and urethra, of the uterus and vagina, causes a sympathetic action of the diaphragm, abdominal muscles and of other parts involved in the act of breathing, and thus gives rise to the distressing symptoms of tenesmus, ischuria, &c.; and lastly irritation of any part of the air-passages at once induces vehement coughing.

To a certain extent, similar effects are produced by irritation of the cutaneous surface, as appears from the following considerations. Tickling certain parts of the skin excites immediately irrestrainable laughter; the application of sudden cold is followed by a succession of involuntary interrupted inspirations; —hence the utility of sprinkling cold water on the face in syncope—infants, apparently still-born, may be often made to breathe by a few smart strokes on the back; bodily suffering, and more especially that arising from any cutaneous injury, as from wounds, burns, &c. excites crying and sometimes convulsive laughter; and lastly, any decided impression on the surface of the body has a marked effect in abating a paroxysm of asthma. As then the surface of the infant is subjected to considerable irritation, from the pressure and uneasy position experienced during delivery, and also from the impression of the cool atmosphere, when it is born, we may perhaps most rationally explain the occurrence of the first act of breathing, by appealing to the reflex operation of the cutaneous on the respiratory nerves. —*Kleinert's Allgemeines Repertorium.*

The problem, involved in the preceding observations, is not very easily solved to our satisfaction. It seems probable that, the changes induced in the state of the circulation of the blood in the heart and great vessels, in consequence of the interruption, more or less complete, of the flow through the umbilical cord, excites a certain uneasy feeling (similar to that experienced when the breath has been held in for some time) within the thorax; and this prompts the animal to dilate it, and thus to give admission to the external air into the lungs. The fact however of the fœtus sometimes emitting distinct cries in utero—a well-marked case, of which anomaly is narrated in our Number for last July, vide Review of Dr. Collins on Midwifery—throws considerable doubt on the correctness of any explanation, which has hitherto been proposed.—*Rev.*

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Illustrations of Abdominal Pathology.

Cases of Abscess of the Liver—in one Instance associated with Hydatids—communicating with the Lungs.

A middle-aged man was seized, in the Summer of 1827, with violent inflammation of the liver. Jaundice came on, and with it the usual symptoms of gall-stones. For several years afterwards, his health was every now and then interrupted by bilious attacks, especially when he was exposed to any mental vexation or excitement. In 1834, he suffered more than usual from these attacks; and, in 1835, he had a severe seizure of acute hepatitis. The inflammatory symptoms on this occasion were succeeded by those of suppuration. On awaking one morning, he was seized with a most distressing hiccup and sense of syncope; and immediately afterwards with a cough, followed by the expectoration, or rather the vomiting, of a large quantity of a greenish-coloured and offensive fluid. The right hypochondrium, which previously had been swollen and painful, immediately became easy and of its natural fulness. At first, it could not be well determined whether the discharged fluid came from the lungs or from the stomach; but the teasing cough and copious expectoration, which continued to harass the patient, naturally led to the suspicion that the lungs were at fault.

The patient felt himself much relieved for some time: but still the fever continued, and was accompanied with a most distressing sensation of burning in the throat and along the larynx. On auscultation, it was found that, immediately under the clavicles, the respiratory murmur was very dull; lower down, on the right side, a mucous râle was audible, and, still lower, the râle became cavernous, and the chest sounded unusually resonant. It was, therefore, suspected that one or more caverns existed in the lower lobe of the right lung, and that these probably communicated with an abscess of the liver. The patient rapidly sunk, and he died on the 5th of October.

On dissection, the liver was found much enlarged. On cutting through the right lobe, a large cartilaginous cyst, filled with a yellowish-brown, thick and fetid fluid, in which there were numerous hydatids, was exposed. Some of these entozoa were still entire, and of the size of a bean or hazel-nut; others were flattened and irregular, and looked as if they had formed parts of hydatids as large as a hen's egg, or even as an orange. On the upper part of the cyst there was a large aperture, which was found to communicate with a cavern in the lower lobe of the right lung. The parietes of the pulmonary cavern were soft, covered with flocculi, and contained a fluid similar to what was found in the hepatic cyst.—*Caspar's Wochenschrift, Mai*, 1836.

To illustrate the occasional discharge of hepatic abscesses by the way of the lungs, we shall briefly narrate the histories of two cases, recorded by Dr. Stokes in the Meath Hospital Reports.

A patient, who had just recovered from a very severe attack of gastro-bilious fever, lapsed into a state of hectic fever. As this was attended with a troublesome dry cough, the chest was repeatedly examined; but no unnatural sound could be discovered on either side, by percussion or even by auscultation. Suddenly he was seized with a feeling of suffocation, and he began to expectorate large quantities of purulent matter. Next day, the lower part of the left side of the chest was found to be quite dull on percussion, and no respiratory murmur, or râle of any sort, was to be heard there. The expectoration continued for some time; and then the auscultatory phenomena were observed to be very different from what they had been on the former examination. First, a mucous rattle was heard over the lowest part of the lung; this gradually extended higher and higher up; and, by degrees, the respiratory murmur and resonance of the voice became audible over all the extent of the side, where previously they had been

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quite extinct. As this patient recovered, we cannot be quite assured of the correctness of Dr. Stokes' diagnosis.

The other case affords an example of an abscess rather *on*, than *in*, the liver, discharging its contents upwards through the diaphragm into the lungs.

A young woman, long affected with amenorrhœa, was attacked first with hæmoptysis and cough, and subsequently with pain in the right hypochondrium, much increased by pressure, by deep inspiration, and by any motion. The sound on percussing the lower part of the right side of the chest was very dull, and the respiratory murmur there was feeble and indistinct. In the course of a fortnight, a diffused inflammatory swelling began to occupy the right hypochondrium. This was poulticed for several days, and then it was opened with a lancet. A large quantity of pus, mixed with blood, flowed out. The matter again accumulated, and it was necessary to make another opening for its discharge. The wound now assumed all the characters of an anthrax; and the patient's strength began rapidly to decline.

On introducing a probe, it was found to pass deep under the muscles in several directions; but whether it entered the cavity of the pleura, or of the peritoneum, was quite uncertain. The respiration in the infra-mammary region was cavernous, and accompanied with a sound like the ticking of a watch. When the patient coughed, or breathed very deeply, a loud gurgling noise was heard. On dissection, the fistula from the outward wound was found to pass between the eighth and ninth ribs to the convex surface of the liver, on which, but external to its peritoneal covering, rested the base of the abscess. This abscess communicated upwards through an ulcerated portion of the diaphragm, with a purulent cavity in the lower lobe of the right lung.

Besides the above cases, we shall briefly notice one detailed in the clinical report of Dr. Gorgone of Palermo (the receipt of which we acknowledged with thanks in our last Number.)

A woman, 36 years of age, presented on the examination of the right hypochondriac region a swelling, which was firm, painful, smooth and uniform, circumscribed, and somewhat elevated towards its centre. By some of the surgeons, it was supposed to arise from a solid enlargement, or from an abscess of the liver, while others regarded it as an encysted dropsical sac.

Dr. Gorgone, finding that an indistinct fluctuation was perceptible, pronounced the case to be one of abscess, situated on the concave surface of the liver. He punctured it with a trocar, and gave issue to a quantity of offensive pus, in which there were several small hydatids floating about. The opening was afterwards enlarged with a bistoury: the discharge flowed copiously for several days, and during that time, upwards of 300 hydatids escaped from the wound. The patient gradually recovered, and was pronounced to be cured in about two months after the date of the operation.

CASES OF ABSCESS IN THE ABDOMINAL PARIETES. By Dr. GORGONE, of Palermo.

CASE 1.—*Abscess in the Hypogastric Region.*

A young female had been for a considerable length of time annoyed with a hard, unyielding, somewhat uneven tumor, situated in the hypogastric region, immediately over the bladder. Dr. G. and another surgeon regarded it as proceeding from an enlargement of the uterus. In course of time, however, an obscure fluctuation was felt in different points of the swelling; and, as the patient's health was now affected with symptoms of hectic disturbance, it was determined to make a deep incision into the most prominent part ("interessando," adds our author, "tutta la spessezza della linea bianca ed il peritoneo:" Are we to understand from this that he divided the peritoneum?), to ascertain the true nature of the swelling. Upwards of three pints of purulent matter were discharged. A troublesome fistula remained for a great length of time, in consequence of the matter having burrowed down at the side of the bladder. The use, however,

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of tent bougies, and the occasional application of the nitrate of silver,* gradually effected an entire and permanent cure in this case.

CASE 2.—*Abscess of the Abdominal Parietes.*

A lady, 32 years of age, had for several years a swelling, of the size of a hen's egg, situated in the centre of the hypogastric region. It was hard, indolent, and occasioned but little uneasiness to the patient. Her medical attendant had pronounced it to be connected with an enlargement of the uterus.

After a smart attack of fever, the swelling became larger and more uneasy; and it now seemed to cause a difficulty in passing the water, and a sense of weight about the anus, and of torpor of the hips and thighs. A consultation of physicians was held, and it was given as their joint opinion that the swelling was *uterine*. By the use of antiphlogistic means, it was brought back to an indolent, inactive state; but soon afterwards the feverishness began to return in daily paroxysms. At first, this was believed to be an accidental attack of genuine intermittent, and quinine was administered. It was soon, however, discovered that the fever had much more of the characters of a hectic† than of an ague. The abdominal swelling gradually became softer to the touch, and an obscure fluctuation was perceived on pressure at several points, the rest of it being still hard and unyielding.

Two surgeons, who now examined the case, pronounced it to be one of encysted dropsy. One or two fresh attacks of inflammation in the tumor added greatly to the sufferings of the patient, and her strength was daily becoming less and less by the recurrence of the hectic fever. At this period Dr. Gorgone visited the patient for the first time. He found a large prominent swelling in the hypogastric region, reaching up as high as the umbilicus, and extending rather more into the left than into the right iliac fossa. It was prominent, smooth and uniform to the touch, soft, and presenting a sense of obscure fluctuation. The uterus was found, on examination per vaginam, to be sound. The opinion which Dr. G. gave of the case was, that there was a collection of pus; but whether the abscess was idiopathic and external to the peritoneum, or whether it was internal, and connected with any disease of the uterus, he could not decide. He proposed, however, to make an incision into the swelling for the purpose of discharging its contents. This advice was opposed by some of the other surgeons, who had been called into consultation. They still regarded it as, probably, an encysted dropsical swelling, and they recommended frictions with mercurial ointment, and the internal use of diuretics, in the hope of dispersing it. The swelling gradually increased in size, and the left limb had now become œdematous and almost paralytic. After much delay, Dr. G. was permitted to cut into the swelling. The integuments being divided, he "cut through the linea alba to the extent of an inch, and the abdominal parietes along with the peritoneum." Nearly six pints of unhealthy-

* In the management of such cases, when we wish to use the nitrate of silver, it will be found to be a most convenient plan, to melt a small portion of the metallic salt in a spoon, and immerse the blunt end of a probe in the liquid caustic. It dries almost immediately, and we thus procure a coating of nitrate of silver on the point of the probe.

† We have seen this very serious mistake committed oftener than once in practice. We well remember seeing, several years ago, a case of *disguised* phthisis—disguised by the absence of cough and expectoration—in the last stage, that of purulent excavation, where the early attacks of afternoon hectic fever were mistaken for imperfect paroxysms of ague, and treated with quinine—we need not add, unsuccessfully.

The mistake was the more excusable, as the patient had recently come from a marshy district.—REV.

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looking offensive pus were discharged. For several days successively, upwards of a pint of matter flowed out from the wound. As the sac was so very large, it was necessary to employ graduated pressure over it with great nicety and care, and to make one or two counter-openings at those parts, where the pus was apt to lodge. Setons were introduced between the openings, for the purpose of exciting action in the walls of this large cyst, and injections of a solution of alum were used daily. The progress of the case was highly satisfactory. By the use of mercurial and of iodine frictions on the abdomen, of quinine and other tonics taken internally, and with the advantage of a pure country air, the patient was ultimately restored to perfect health.

MEMORABLE CASE OF SPONTANEOUS PERFORATION OF THE BOWELS—SERO-PURULENT EFFUSION IN THE ABDOMEN—LIFE PROLONGED BY REPEATED PARACENTESIS—RAMOLLISSEMENT OF THE URINARY BLADDER.

The following case appears to us remarkable, for the prolongation of life under the most unfavourable circumstances. It is narrated at great length by M. Piorry himself, under whose care the patient was, in the Bulletin Clinique for June 1836.

A young man, 20 years of age, had been ailing from diarrhœa, vomiting, and other symptoms of general malaise, for several weeks before his admission into the Hôtel Dieu. There had been also a gradual tumefaction of the abdomen, coming on during the preceding five or six days. When admitted, the patient was in a weak typhoid state; the distention of the abdomen was very considerable, and this distention had mounted so high, that the heart seemed to have been pushed up much nearer to the clavicle than in health. The sense of fluctuation was indistinct, and the sounds elicited by the percussion of the abdomen varied in different parts—in some places being quite dull, in others resonant.

The diagnosis, which M. Piorry formed, was that the case was one of "enterite typhohemique et hydro-peritonite." He recommended that the abdomen should be tapped. On withdrawing the trocar, only a few drops of serosity flowed out from the canula. By inserting, however, an elastic gum sound through the canula into the abdomen, and moving its point freely about in different directions, three pints of a sero-purulent fluid, having an odour partly fæculent and partly of sulphuretted hydrogen, escaped. The operation lasted upwards of an hour.

M. Piorry was now more satisfied of the correctness of his diagnosis, that a perforation of some portion of the bowels had taken place at the period when the abdomen had begun to swell; and he conjectured that this perforation was in the small intestine, near the cæcum. On the day following, the 19th April, another puncture was made, and four pints of a fluid, quite similar to that already evacuated, escaped by the canula. The operation was again repeated on the 21st, and also on the 22d: "le liquide etait encore de la même nature, et presentait la même odeur; seulement il etait plus épais et plus jaune." For several days subsequently to the last operation, the state of the patient was in all respects better; but a diarrhœa then set in, and the tumefaction began to increase. On the 5th of May, the paracentesis was again performed; and, this time, some gas escaped along with a pint and a half of a yellowish, opaque, and fetid serosity. The patient lingered on to the 14th.

On dissection, the abdomen was found to contain between three and four pints of a highly offensive, yellowish-green serum. Almost the whole surface of the abdominal peritoneum was thickened and lined with a dense layer of pseudo-membranous deposit, soft, and of a yellowish colour on the surface; but which had not, in any part, contracted adhesion to the intestines, even at those points where the punctures had been made. The intestines were col-

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lected into an agglutinated mass in the ileo-cœcal region. On examining the mucous surface of the large gut, the glandulæ Brunneri were found inflamed and ulcerated. At one point, just at the commencement of the colon, there was a large patch of these tumefied, livid, and ulcerated follicles, and at this point there was a perforation, large enough to permit the point of the little finger to pass fairly through all the coats of the intestine. Another perforation, but of much smaller size, was found in the ileum before it joins the caput coli; and, on slitting open the gut, the mucous surface in different parts was found corroded by numerous superficial ulcerations.

The only other morbid lesion, which we shall notice, was the remarkable degree of ramollissement which the urinary bladder had undergone. So soft had its parietes become, that the mere weight of a probe was sufficient to penetrate them.

Observations. M. Andral has narrated, in his Clinique Medicale, a case, where the patient survived for a length of time, after a spontaneous perforation of the intestine and of the abdominal parietes. Dr. Stokes of Dublin has lately communicated the histories of some cases, to shew the good effects of large doses of opium in arresting the development of abdominal inflammation under such alarming circumstances; and M. Chomel has adopted the same practice with advantage.

That the life of our patient was greatly prolonged by the repeated paracentesis cannot, we should think, be doubted. We are not aware that any such case has been put previously on record.—*Bulletin Clinique.*

On the Enlargements of the Spleen, after Agues and other Fevers.

Before we discuss the question of the probable cause of those enlargements of the spleen, which are so often the consequence of intermittent fevers, it may be useful to glance at some of the most curious and best ascertained facts connected with the healthy anatomy of this viscus. To Professors Felici and Panizza of Pavia, the profession is indebted for an admirable monograph on this subject; wherein they have most indisputably demonstrated the analogy of the texture of the spleen, with that of erectile tissues in general, and especially of the corpora cavernosa of the penis and clitoris. The character of this texture may be exhibited, either by repeatedly washing a portion of the organ with pure water, until it is completely freed from all the blood which it contains; or by blowing air along the splenic vein, so as to distend the cells. The latter of these methods will be found to succeed better when the spleen is enlarged, than when it is, from any cause, contracted in its dimensions. In our brief examination of the anatomy, we shall commence from the exterior of the viscus and proceed inwardly. The outer envelope of the spleen is its serous or peritoneal coat; this adheres firmly to the subjacent fibrous tissue, the tunica propria, or proper investing capsule, which binds or confines the whole organ together in one mass, and from whose inner surface are sent off numerous prolongations, some of which dip between the different portions, or lobules, forming the septa, or partitions between these, and others, by joining and rejoining with each other, give rise to the cellular, or reticular texture, which pervades the whole viscus. If the spleen be hypertrophied, the cells may be seen with the naked eye; but, in its natural state, the use of a magnifying glass is necessary to discover them.

The tunica propria, and all its prolongations are evidently very contractile; for if we cut a fresh spleen into slices, the contraction of the septa causes all the contained fluid to ooze out, and the divided surface then exhibits a granulated appearance, similar to what we observe in a portion of lung, which is in the second stage of peripneumonia.

The arterial distribution of the spleen deserves particular notice. No sooner do the branches of the splenic artery

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enter the substance of the viscus, than they become so minutely subdivided, that they can no longer be traced. Assolant has proved, by a multitude of experiments, that, if one of the branches of the splenic artery be tied, the portion of the organ, on which the branch is distributed, is inevitably killed; and he infers therefore that there is but a very imperfect anastomosis between the bloodvessels of the spleen. This is confirmed by the fact, that if air is blown into one of the arterial branches, it does not pass freely, if at all, into the others. The anatomy of the veins of the spleen is better understood. They commence by extremely minute twigs, which are continuous with those, of which the cellules are formed, and of which they appear to be the mere prolongations; several of these twigs uniting give rise to larger branches, whose parietes are perforated with numerous apertures, large enough to admit a probe, and which communicate directly with the cellules. These apertures become smaller and less frequent, as the branches approach the large divisions of the splenic vein, which are usually three or four in number, and which meet at the concave edge of the spleen, into one large trunk: this proceeds on to meet the vena portæ. The lymphatic vessels of the spleen are neither numerous, nor very conspicuous. They are discovered much more easily on its surface, than within its texture. The nervous supplies are derived partly from the cœliac plexus, and partly from the par vagum.

Without entering upon the labyrinth of theories, as to the uses and functions of the spleen, we may be permitted to say, that it is, at least, probable, from the analogy of its structure with that of the recognized erectile tissues, that there is some substance interposed between its vasa sanguifera, *inferentia, and efferentia:* unless we admit M. Andral's opinion that "la rate n'est qu'un reseau veineux, où la forme celluleuse tend à remplacer la forme vasculaire." Whether, however, the spleen is to be considered as a mere diverticulum to the blood of the abdominal viscera, during certain states, or operations of the system; or whether it has not at the same time more elaborate duties to perform, (as for example being accessary to the formation of bile, or to the production of blood, either directly, or by generating a peculiar sort of lymph, which is afterwards conveyed by the absorbents into the thoracic duct) remains still a problem of most difficult solution. After these short preliminary remarks, we now approach the question, as to the probable cause of the enlargements of the spleen, which, it is well known, are very frequently induced by intermittent fevers.

Some pathologists have attributed these lesions to a merely passive or atonic accumulation and congestion of blood in the veins or cells of the viscus; and they have altogether excluded the idea of any active increase of vascular action. The cause, according to them, is therefore purely mechanical; the normal contractility of the veins, or cells being supposed to be overcome by the excessive distention of their parietes.

But surely this mode of accounting for any change in the condition of a living organ is not very consistent with what we observe in other parts of the body. What viscus can be alternately overcharged with, and drained of blood, without its vital energies being affected, or without some reaction being induced? And again, when we consider the variety of morbid degenerations, to which the spleen is subject, such as, induration, ossification, softening, conversion into a black pultaceous mass, the formation of genuine purulent matter, and the adhesion of its surfaces to the surrounding organs, surely we shall be forced to believe that some other morbid process, besides that of mere congestion of blood, may affect its substance. Moreover, if the engorgements of the spleen which occur during the course of intermittent fevers, were owing altogether to an excessive accumulation of blood in the vena portæ, we might naturally expect, that some of the other viscera, whose veins terminate in the same trunk with those of the spleen, should be almost always similarly diseased at the same time.

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Occasionally, indeed, the liver as well as the spleen is found enlarged; but this is by no means of constant, nor indeed of very frequent, occurrence. Morgagni was of opinion that the liver is oftener contracted than enlarged in such cases; and on the other hand it is worthy of notice that in the majority of the examples of diseased liver, recorded and described in Andral's Clinique Medicale, no notice is taken of any co-existent lesions of the spleen; and that, out of the 187 cases mentioned in Lieutaud's Anatomie Medicale, 23 of them only were complicated with splenic alterations.

The very obvious inferences from these facts are sanctioned and confirmed by the physiological consideration, that, as the veins of the spleen are so much larger and more numerous than its arteries, it is not easy to understand, how a stasis of the blood, or a passive congestion can take place in them, unless there be some obstruction in the vena portæ, or vena cava, to the centripetal blood. Such a complication may occur, and does, we know, exist in cases of diseased heart; in which there is a most distressing tendency in almost every organ to a morbid accumulation of venous blood. Hence the source of the apoplexies, dropsies, dyspnœas, engorged livers, hæmorrhoids, &c. which are so frequently observed in the progress of cardiac cases.

But, although these reasons may be considered satisfactory to shew that enlargements of the spleen do not depend upon a mere passive congestion of the venous blood in its texture, the question, what is the cause, or rationale of the afflux of the blood from the surface of the body, to the internal parts, and more especially to the spleen in agues? now presents itself to our consideration. Cullen's hypothesis is well known to most medical readers: the primary spasm of the peripheral vessels, the contraction of their diameters, and the consequent expulsion of part of their contents, &c. from the surface to the deeper organs are its leading features. The first movement in the morbid action is, according to Cullen, in the vessels of the skin, and the internal congestions are the necessary and almost mechanical effects of the blood being driven from the skin inwards. Dr. Fallot, the author of the present paper, assumes it to be more consistent with the operations of living bodies, that wherever a sudden alteration in the quantity of blood in any part or organ takes place, we may be satisfied that some change in the innervation of that part or organ has already preceded it; and that it is not the result of a merely mechanical afflux from one point to another. "*Ubi stimulus ibi afluxus,*" is a physiological maxim, to which there is no exception; and the converse of the proposition is equally true, that where the excitement is defective, there is the afflux of blood diminished.

If we observe what takes place during the re-action of an ague, we shall find that the feeling, or consciousness, to the patient at least, of the hot stage very distinctly precedes the full throbbing pulse, and warmth of the skin, which are the indications to others of its presence. Shall we then make an exception of the spleen, and consider it as nothing but an inert sponge, at one time soaked with blood, and at another time empty, according as other organs have an excess, or deficiency of the circulating fluid? And when all other erectile tissues are uniformly subject to the law that we have already announced, viz. that of being engorged only when they are stimulated, and of becoming flaccid, when the stimulation is diminished or withdrawn, why shall we apply other laws to the spleen, and suppose that it is excepted from the vital actions of similar parts? We infer, therefore, that if the spleen becomes congested and enlarged during an intermittent fever, this congestion and enlargement are the effects of an abnormal afflux of blood, occasioned by the pre-existence of an abnormal stimulation in the part. Observe the changes induced in a splenic tumor in the phases of an ague. Soft, and but little painful during the intermission, it becomes distended, hard, and sensitive during the cold stage; but it is not, until the vascular re-action of the hot stage is fairly established, "quand

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les mouvemens d'expansion sont en pleine activité," that it attains its maximum of intumescence, resistance, and tenderness. When the irritation is slight or temporary, the vascular excitement subsides, and is gradually dissipated entirely, the swelling being no longer appreciable. When it is more severe, or is persistant for a considerable time, the blood is forced into the areolæ, or minute cellules, which then become so gorged and over-distended, that their parietes take on an inflammatory action, and this state is succeeded by one of induration, or by the deposition of purulent matter. Under these circumstances the spleen, from its augmented bulk, is felt projecting below the edges of the false ribs on the left side.

Supposing now, that the question which we have been considering, viz., whether the enlargements of the spleen after agues are generally the result of an active, or of a passive congestion of blood in its texture, to be decided according to the views explained above, another of almost equal difficulty immediately presents itself. This active congestion—is it idiopathic and independent of the affection of other viscera; or is it merely sympathetic, and consecutive on some irritation existing elsewhere?

On the one hand, it may be alleged that the diseases of the spleen (with the exception, perhaps, of the enlargements now under discussion), are very rarely isolated, but are usually co-existent with lesions of other organs; and on the other hand, we must recollect that our ignorance of the healthy functions of this viscus precludes us from detecting its morbid deviations, unless these are accompanied by obvious and visible changes of structure. The subject, therefore, of splenic disease must be one full of uncertainty and difficulty. M. Broussais, in treating of the diseases of the liver, has rendered it probable that this important viscus is very seldom primarily or idiopathically affected, unless from an external injury. What is probable of the liver, is much more so of its neighbour, the spleen. The frequent co-existence of splenic disease with diseases of the heart deserves the attention of morbid anatomists, and has not received that minute investigation, which the importance of the subject requires. Dr. Kreisig, of Dresden, who has written a good treatise on Die Krankheiten des Harzes, explains the connexion of splenic with cardiac disease, by reference to the obstruction offered to the free return of the blood in the venæ cavæ, and to the consequent congestion, which all the abdominal viscera must experience under such circumstances. This explanation, though satisfactory to a certain extent, cannot well apply to every case of diseased spleen. According to Kreisig himself, alterations of the spleen are frequently co-existent with diseases of the left, as well as of the right, side of the heart; and Testa, and other Italian physicians allege that many cardiac affections are secondary to, and are apparently induced by, morbid states of the spleen; although this viscus may not have become increased in bulk, and cannot therefore be supposed to have excited any mechanically injurious effect on the free circulation of the blood through the heart and large vessels.

Baron Alibert has suggested in his Nosographie Naturelle, that this sympathy between the spleen and heart may be accounted for, by their nervous connexion, through the medium of the par vagum, which he thinks "partage avec le grand sympathique la faculté de produire des sympathies." Without denying the importance of this connexion, we cannot concede to it the exclusive influence, assigned to it by the Baron: else how comes it, that the liver and stomach, which derive part of their nervous supplies from the same source, viz., the nervi vagi, do not as frequently sympathise with diseases of the heart, as the spleen is known to do? Dr. Fallot is, therefore, induced to believe that it is rather in consequence of it (the spleen), being an accessary or auxiliary instrument or agent of the circulation, and designed by nature to avert, and in some degree to compensate for the accidents that might ensue from any interruption of this vital function, (whether this arises from an excess, or

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from a defect of activity), that it is so intimately associated with the heart and lungs. This functional association, or sympathy, is not nearly so obvious and appreciable during health, as when either of these organs is involved in disease.

If the heart and lungs become, from any cause, oppressed with venous blood —let us remember that this state occurs during every cold stage of an ague—and in an obstinate case, how frequent must this oppression or congestion have taken place—the spleen must very speedily suffer, in consequence of the column of blood pressing back upon every part of the portal system: and where do you think, asks M. Fallot, " qu'elle doive retentir plutot que dans la rate, unie au cœur par des liens de synergie pour l'accomplissement de la meme fonction ?"— Moreover, the great size of the splenic artery, and consequently the large quantity of blood constantly transmitted through it, must of a necessity predispose the organ to be affected with various morbid states. It is a subject of great pathological interest, to ascertain, what is the relation, as to cause and effect, between enlargements of the spleen, and the very frequently simultaneous occurrence of alterations in the mass of the blood. It is certainly a fact, known to every experienced physician, that when the spleen has been diseased for any length of time, a dyscrasis of the circulating fluids is almost invariably induced. We cannot afford room, at the present time, to enter upon the discussion of this very curious theme: the mere suggestion of it must be sufficient.—*Bulletin Medical Belge.*

It may be useful to subjoin a few comments on some of the statements in M. Fallot's paper, and more particularly upon the suggestion made at its close. It is not quite easy to determine, whether the dyscrasis of the circulating fluids is owing to the morbid state of the spleen, or whether the converse of the proposition be true. However this may be, the constitutional symptoms usually associated with chronic enlargements of the spleen are these: general debility, paleness and a deficiency of red blood in the capillaries; the conjunctivæ are pale and bloodless, the scleroticæ are of a pearly blue colour, and the complexion is waxen, as in chlorosis.* If the disease has existed for some time, the extremities are apt to be cold, and the skin is pale, dry, shrivelled, and often furfuraceous. Adults do not usually suffer so much from splenic enlargement, as children do. In younger subjects, it is very apt to induce quickly an incurable marasmus; whereas we not unfrequently observe that, with adults, it may exist for a length of time, without being attended with serious disturbance of the constitution. (Does not this difference seem to indicate that this viscus is probably more or less directly connected with the formation of the blood?) Patients affected with vascular engorgements of the spleen are very prone to foul sloughing ulcers, from slight wounds or bruises; and all restorative processes are observed to be very tardily and imperfectly performed. The blood of such patients is always more or less unhealthy: sometimes it coagulates only imperfectly, and no serum is separated; in other cases the cruor is black, soft, and does not assume a florid hue on the surface from the contact of the air. In short, not a few of the attributes or symptoms of genuine scorbutus are found in many cases of enlarged spleen. There is a tendency to hæmorrhage from slight wounds, or ulcers; punctures and abrasions of the skin are apt to ulcerate; the gums become gangrenous, the teeth fall out, and the alveoli become carious. Hæmoptysis and hæmatemesis are not unfrequent occurrences.

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* The late Dr. Twining, of Calcutta, has very justly remarked that the constitutional disturbance which usually accompanies enlargements of the spleen, has many characters in common with chlorosis, scorbutus, and some forms of anæmia.—*Vid. Vol.* I. *of his Clinical Illustrations of the Diseases of Bengal.*

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Besides the class of symptoms now alluded to, there are others which deserve to be noticed; such as the dyspnœa, (the blood seems to be imperfectly decarbonised,) and the tendency to panting and palpitation on any active exertion.

The functions of the stomach and bowels too are almost always disturbed; the food being not properly digested or assimilated, and the alvine evacuations irregular and unhealthy. There is moreover very generally a despondency and inactivity of all the mental powers.

In the advanced stage of the disease, dysentery or some form of dropsy usually supervenes.

The rapidity with which enlargements of the spleen sometimes occur after tropical fevers, and the enormous size which they may attain, are very striking.

It is very common not only to *feel*, but also to *see* it extending down on a level with the navel, and even lower. In extreme cases, we are told, the diseased spleen occupies more than half the abdominal cavity, extending to the right of the umbilicus and reaching into the left iliac region.

With respect to the treatment of splenic enlargement, it is unnecessary to state that the removal of the patient from the climate, where he has acacquired it, is in general by far the most efficacious remedy.

Should there be any feverishness of the system, moderate detraction of blood may be requisite, and the effects of this should be kept up by the exhibition of some active purges. When the enlargement is chronic and quite apyrexial, the use of purgatives, in union with bitters and with some form of steel, is by far the most successful treatment which can be adopted. Dr. Twining gives a formula for a compound, to which he gives the name of "spleen mixture," and which has been very successful in his practice. It is thus:—

℞. Pulv. jalapæ, pulv. rhei, pulv. calumbæ, pulv. zingiberis, potass. supertartratis, āā ʒj.
Ferri sulphatis, gr. x.
Tinct. sennæ, ʒiv.
Aquæ menth. sativæ, ℥x. Misce.

An ounce and a half of this may be given twice daily to an adult. Frictions over the affected side, and compression with a flannel roller, will be very generally useful at the same time.

Blisters are of very doubtful propriety. They are apt to be followed by troublesome ulcerations. The native practitioners of India have long been in the habit of employing acupuncturation in enlargements of the spleen.—Dr. Twining, whom we have already quoted, remarks in reference to this remedy: "I have repeatedly punctured indolent and indurated spleens with long needles—2, 3, or 4, being introduced exactly two inches in depth—and in some instances certainly with beneficial effects."

Lastly, with respect to that panacea of some English practitioners in all visceral diseases, mercury, it deserves to be impressed on the attention of every physician, that there is not perhaps a more dangerous or destructive practice, than that of exhibiting mercurials in most splenic enlargements. The constitution of the majority of patients, affected with this disease, seems to be unusually susceptible of the injurious effects of this mineral; and, therefore, as Dr. Abercrombie most justly remarks, "attempts to reduce enlargements of the spleen by mercury are generally followed by the worst consequences."—*Ed. Med. and Surg. Journ. Vol.* 22.—REV.

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HYGIENE PUBLIQUE. Par A. J. B. PARENT-DUCHATELET. Deux Tomes, pp. 552 and 704. Bailliere, 1836.

[Continued from p. 410.]

M. Duchatelet next proceeds to enquire what influence the sewers have on the health of the workmen, employed in keeping them in repair. He first alludes to the effects which they produced upon himself. The usual symptoms, which he first experienced, were headache, and a certain degree of stupor, dryness of the throat, thirst, loss of appetite, and sometimes slight dyspnœa; but all these inconveniences speedily passed away, after he remained some time in the sewer. With respect to the general appearance and health of the regular workmen, he tells us that they are almost all thin, and rather meagre; their complexion is generally pale and earthy; the lines of the face are deeply marked;* the abdomen is usually much retracted;—yet, on the whole, the health of these people is "parfaite et fort rarement derangée." Their lives, too, do not seem to be at all shortened by their apparently most unhealthy occupation. Many of them suffer from lumbago and sciatica,—in consequence, probably, of the wet to which they are exposed, and also of the bent position, which they are so often obliged to maintain for a length of time. They are, he assures us, very rarely the subjects of cutaneous disease, or of any of those maladies which have been called "putrid!" But, from numerous observations and enquiries, M. Duchatelet is satisfied that all venereal complaints are greatly aggravated in the workmen, if they continue their occupations. Indeed, it has been very often remarked, that an impure atmospherc, of any description, is exceedingly unfavorable to the recovery of syphilitic patients: the disease generally becomes worse, and the only satisfactory method of effecting a cure is removal into the wholesome air of the country.

The same observation was made, forty years ago, by Parmentier and others, in their memoir on the health of the "vidangeurs," or those employed in cleaning the "fosses."

The late distinguished M. Hallé, who probably did more for the hygiene of Paris than any other single individual, confirms the truth of the statement, that syphilitic disease is always exceedingly obstinate and severe in these men.

But of all the dangers, to which the workmen are exposed, none is so alarming as that of asphyxia from the air becoming vitiated with azote, sulphuretted hydrogen, and other irrespirable gases. The symptoms, accompanying the attack of asphyxia, vary somewhat according to the nature of the gas, which has caused it. If it has been the ammoniacal sulphuretted hydrogen, the person is seized very suddenly; he becomes quite insensible in the course of a minute or so, and death is usually preceded by convulsions of the limbs. On the other hand, the attack is much more slow and gradual, when the asphyxia has been induced by azote: the breathing gradually becomes more and more embarrassed; vertigo and confusion come on; there are no convulsions; and the person is slowly suffocated. From what M. Duchatelet has observed, azote is the gas which is most frequently and most abundantly evolved in infected sewers.* The presence,

* These men seldom exhibited that bleared appearance of the eyes, so commonly observed in the regular scavengers, such as are employed in emptying the "fosses d'aisance." M. Duchatelet attributes this affection to the ammoniacal gas, evolved from putrefying fæcal matter. Now this gas does not exist, or only in minute proportion, in the sewers.

* The results of two analyses are these:—

In one, the proportion of azote was	94
of oxygen	2
of carbonic acid, &c. gas	4
In the other, the proportion of azote was	89
of oxygen	6
of carbonic acid, &c. gas	5

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however, of the sulphuretted and carburetted hydrogen gases, must add greatly to the pernicious effects of the azote.

In 1826, one of the chief sewers in Paris, that of Amelot, became obstructed, in consequence, we believe, of its having been neglected for a length of time. Various attempts were made to clear it out; but none of these attempts had succeeded, and indeed most of the workmen, who had been employed, had suffered from more or less complete asphyxia, and some of them had lost their lives. The sewer was therefore left to itself; and became an insufferable nuisance to all the district, through which it passed. In course of time, it was completely stopped up; and then the contents flowed back upon the streets, and even into the courts of many houses in these streets. To add to the difficulties to be overcome, we ought to state that a new sewer had, a short time previously, been made to terminate in the obstructed one, and that all the blood, garbage, &c. from one of the chief "abattoirs" of the metropolis, as well as the water of many thousand sulphureous baths used at the Hôpital St. Louis, were discharged into the former. A commission, consisting of some of the most distinguished engineers and chemists, was appointed by the Prefect of the Seine to superintend the operations necessary for the "curage et l'assainissement" of these sewers. Our author was the secretary and reporter of this commission.

The workmen began their unpleasant operations at the mouth of the sewer, where it terminates in the Seine opposite to the "Ile Louviers." They were engaged for upwards of six months in this offensive and dangerous duty; but, in consequence of the admirable arrangements made, and the hygienic precautions which were taken, not a life was lost; although several of the workmen were, at different times, partially asphyxiated. By bringing them, however, at once into the open cool air, and exhibiting stimulants, most of them were quickly restored. In one case, after respiration was freely excited, a universal shivering, followed by convulsions of the limbs, came on: to these symptoms succeeded delirium, and then absolute mania; the patient roared and screamed aloud, tossed himself in all directions, and appeared to be quite insensible of those about him. After the operation of an emetic, his consciousness gradually returned, and in the course of a few days he had quite regained his former health.

Another man was brought to the surface insensible, pale, and motionless; the limbs being quite relaxed and the respiration suspended. By sprinkling cold water on the face, the breathing was restored; and then a few spoonfuls of an æthereal mixture brought back his consciousness and power of motion.

The directions, which M. Duchatelet gives for the treatment of persons asphyxiated by foul air, deserve to be shortly noticed. The person ought to be immediately brought into the open air, stripped of all his clothing, stretched out on the ground, with the head slightly thrown back; cold water should then be dashed smartly on the face and chest; vinegar or volatile alcali should be applied to, or injected into the nostrils, and the nostrils and throat should be tickled with a feather. Friction on the surface is also very useful.

If these means do not quickly succeed, then artificial respiration must be induced. M. Duchatelet has never seen any good, but sometimes serious mischief, from letting blood in asphyxia from breathing a foul air. He therefore, as a general rule, condemns the practice, until the patient has recovered from the immediate effects of the attack. This caution is the more necessary to be attended to, as medical men are far too apt to bleed indiscriminately in most cases of suspended animation—

M. Duchatelet has appended a table of twenty-one analyses of the air, taken from infected sewers. In every one of these, the proportion of azote was found to be greatly increased, and that of oxygen to be correspondingly diminished. We recommend physicians and chemists to examine the particulars of this table for themselves.

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and we may add, of injuries of the head, and apoplexy. Whenever the act of breathing commences, the great difficulty is overcome; for, when once begun, it is easy to promote it by stimulants to the nostrils, by the feather introduced into the throat, and by tickling the soles of the feet. In the after-treatment of these cases, it is frequently necessary to apply leeches to the temples, or even to bleed from the arm, and to administer derivative medicines, to counteract the cerebral congestion.

We have already mentioned that some of the workmen suffered repeatedly from ophthalmia. This affection was transitory, if treated at once with astringent stimulating collyria. Sedative and emollient applications were of no benefit.

The attack of colic, which in some cases quite resembled in severity the worst form of colica pictonum, yielded generally to antispasmodic purgatives.

Before quitting this subject, we shall briefly allude to some of the most approved means to be employed by those, who venture into places where the air is much vitiated. The first thing to be considered is, whether it be possible to establish a current of atmospheric air through the place, by establishing a second opening in an opposite direction from that where the first is situated. If this can be done, the most ready and effectual mode of causing a free circulation of air is, to place a brazier of live coals between the two openings.

After ventilation, perhaps no means are more powerful in counteracting the deleterious agency of foul air, than chlorine and the chlorurets. The chlorine itself—obtained from a mixture of the oxide of manganese and of muriatic acid—is, for general purposes, too strong and suffocating to be employed while the workmen are in the sewer; but this objection is obviated by having recourse to its use, an hour or so before the men go to work. The chloruret of lime, however, on the whole is to be preferred. It yields a slow and very steady supply of chlorine; never too free, to incommode the breathing, and yet active enough to purify the surrounding air. Another advantage, which it possesses, is, that it may be used either in a dry or fluid form. One of the most convenient modes of using it by the sewermen and others, is to sprinkle a quantity of the dry powder on a heap of straw: it should be renewed four or five times in the course of the day. Another very good plan is to take a wide-mouthed bottle, and fill it with tow, on which the dry chloruret has been sprinkled. This bottle should be hung round the workmen's neck. Besides these precautions, it is useful to wash the face and hands repeatedly with the solution, and to throw a quantity of it on the offensive materials, which the men are working at.

Masks of various forms, and other similar contrivances have been suggested, with the view of enabling persons to pass through, and to remain in places, where the air is more or less vitiated.

During the plague, which raged at Marseilles in 1720, the physicians and other attendants on the sick were in the habit of using masks, which covered completely the head, and were provided with eye-holes, and with a long appendage, opposite the mouth and nostrils, and anointed on its inner surface with various balsamic substances.

The simple expedient of tying a piece of sponge, or folded linen well wetted with vinegar, over the mouth and nostrils, may often be used with much advantage. M. Fosse, who has paid much attention to the subject now under consideration, informs us that, with this simple means, he has been enabled to enter the most infected places, and to continue in them for 10 or 15 minutes at a time, without experiencing any inconvenience. The fluid, with which the sponge is wetted, should be different according to the nature of the deleterious emanations. Thus, when M. Fosse went into a chamber filled with the fumes of sulphur, he found that a solution of potash was most useful. On other occasions, when he was exposed to the abominable effluvia of sewers and privies, vinegar or a solution of the chloruret of lime was preferred. Lime water is probably the best preservative against carbonic acid fumes. Pure water will suffice to pu-

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rify the air from matters, which are merely diffused mechanically through it, and to condense the vapours of metallic substances, as of mercury and arsenic.

To enable persons to remain for a greater length of time in an irrespirable atmosphere, it is necessary to have recourse to some means, by which a communication may be established either with the external air, or with a reservoir containing it. Such is the principle, it is well known, by which the men who go down in diving-bells are enabled to continue under the surface of the water for several hours at a time. On one occasion, at Bourdeaux, M. Duchatelet saw the workmen remain for nearly six hours continuously under water.

We may here allude to a very ingenious contrivance, proposed some years ago by an English workman of the name of Robert, to enable persons to enter into the rooms of a house on fire, and to remain in the suffocating atmosphere for a considerable length of time. The principle, on which this contrivance rests, is, that the air in rooms filled with smoke, is always much less vitiated near the floor than towards the ceiling. The apparatus consists of a mask, provided with eye-holes, which is put over the head, and secured with a tape round the neck, so as to prevent the admission of the surrounding air to the mouth and nostrils. A leather tube, four or five feet long, proceeds from the mouth-piece to which it is secured, and this hangs down to near the ancles; through it the person breathes. The open and inferior end of it is lined with flannel, or with thin pieces of sponge, which have been previously well wetted either with plain water, or with vinegar and water. The first experiments were performed in public at Manchester, in 1825. Robert and another workman, provided with their apparatus, went into a room in which a quantity of cotton had been burned, and which was quite full of smoky vapour: they remained in it for twenty minutes. On another occasion a quantity of moist straw, chips of wood, sulphur, and resin, was set fire to in the middle of a room, and the windows and door tightly closed, so that the room was quickly filled with the most suffocating smoke. Robert remained in it for upwards of half an hour. He was indeed considerably exhausted when he came out; but this exhaustion seemed to be owing rather to the high heat of the room, than to any embarrassment of the respiration. Numerous other experiments were performed with the apparatus both in this country and in France; and M. Duchatelet informs us that it has been (with certain modifications) so much approved of in Paris, that every body of firemen is provided with it. The chief objection to it—but one which may be very easily remedied—is, that the expired air is not got rid of, but enters the tube to be again inspired. If it was provided with a double, instead of a single, tube—the one for inspiration, and the other for expiration—the apparatus would be much more efficient. The reader will find a number of useful diagrams and descriptions of different instruments in M. Duchatelet's work.

Here we must stop in our analytic review. Happy we should have been, had the author been spared to meet the reward of praise and of profit, which his labours have so richly merited. But naturally feeble, and of a delicate constitution, the powers of his body were unequal to support the energies of his too active mind,

> "A fiery soul which, working out its way,
> Fretted the puny body to decay,
> And o'er-informed the tenement of clay."

His literary and scientific works will long remain a monument of his unwearied and most meritorious exertions.

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Clinical Review.

North London Hospital.

The Best Mode of Paring a Bottle-Nose.

It is well known to the "men about town," that Mr. Liston has operated on several noses, the protuberance and tint of which had acquired their wearers a reputation not altogether pleasant. One or two gentlemen had felt to their cost the truth of Coleman's song, that:—

> Though every one can't have a beautiful nose,
> Still, a nose shouldn't look like a snodt.

Hypertrophy of the nose, it is scientifically termed lipoma, is more prevalent, perhaps, in the upper than in the lower classes. It is a gentlemanly sort of malady, and usually demonstrates that the patient has not entertained an insuperable antipathy to "port." Sheridan and Sir William Curtis had each of them a nose much larger than what usually falls to the lot of men, and of a very gorgeous purple tint. They were excellent good fellows, and bore their blushing honours on them to the last. Yet we doubt whether they would not now (could they be recalled) avail themselves of the scalpel of Mr. Liston, who has been fashioning noses, both of Grecian and of Roman cut, according to the predilections of the parties. We extract the following clinical observations on the disease from the Lancet.* They give a better account of it, and of the operation required for its removal, than we have elsewhere seen. Passing over some references to authors who have treated of it, we proceed to Mr. Liston's own observations.

"He considered that the disease affected the cellular tissue in many cases more than the skin, being a sort of hypertrophy of the subcutaneous cellular tissue; the cartilages may, perhaps, be a little thinned, but are not involved in the disease; the skin is thickened, and opened out in its texture, and the sebaceous follicles are very much enlarged. They were not, however, so large in this as he had seen them in several other cases which had been under his care. The internal structure resembled the Barbadoes leg, and the tumour which sometimes appears in the scrotum. They saw in this preparation taken from the patient Snell that the disease was seated in the cellular tissue; the size of the tumour had, however, much diminished since its removal by operation, in consequence of the escape of a large quantity of albuminous serosity which it contained. He had described the disease some years since under the title of lipoma of the nose, and he might read a short passage from his *Elements of Surgery* descriptive of it:—

'The integuments costering the apex and alæ of the nose are sometimes opened out in texture by interstitial deposit, forming a lipomatous tumour, lobulated, discoloured, and intersected by fissures. The sebaceous follicles are sometimes enlarged enormously, so as to admit the point of a quill. Turgid veins ramify superficially, and the surface is of a reddish blue or a purple colour, varying its hue from time to time according to the state of the health, and the changes in the circulation. The enlargement often attains great magnitude, producing much deformity; vision is obstructed, and the introduction of food, both solid and liquid, interfered with; the lobes tumble into the wine-glass, spoon, and cup, and are sometimes so elongated as to require being pulled aside in order to uncover the mouth; breathing is also impeded, more or less, by encroachment on the nasal orifices. The disease may be often attributed to hard living, but many not intemperate labour under it.

"It is desirable to have the tumour removed, even before it has become large; and it can readily be conceived that local applications must fail in

* Lancet, Jan. 21, 1837.

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bringing the skin into a healthy condition. Incision is required. If both sides of the nose are affected, a small scalpel is carried down in the mesial line through the altered structure, and whilst an assistant places his finger in the nostril the surgeon lays hold of the integuments with a sharp hook, and carefully dissects away the diseased parts, first on one side and then on the other. The vessels are then tied, and sometimes a considerable number bleed smartly; oozing may continue, but is readily commanded by continued pressures, the nostrils being well stuffed. Afterwards such dressings may be applied as agree with the stages of the sore. After cicatrization the comfort and appearance of the patient are much enhanced, and there is no risk of reproduction.' To this description is appended a note, which states, that in making a section of the tumour accumulations of sebaceous matter are sometimes observed. An accumulation may be perceived in one of the follicles, forming an encysted tumour nearly as large as a nut, in one of these specimens, which was removed some months since."

Mr. L. has never known lipoma end in malignant change of structure. The great objections to it are the inconveniences that it occasions, and particularly the unfavourable impression which it makes on lookers-on. No body likes to be hooted at by the little boys, and to be called "nosey" in the streets.

The use of the ligature has been recommended. But it is painful—disgusting from the stench occasioned by the slough—and it does not satisfactorily remove the deformity. It is only in very vascular tumors that it should be used, in combination, or not, with excision, according to the circumstances of the case. We extract some further hints upon the mode of operating.

"The operation by incision is not attended with great difficulty, the hæmorrhage is readily restrained by pressure, the nostrils being plugged. You need not stop to tie the vessels during the dissection; afterwards it may be necessary to tie one or two. You would notice how the sides of the nose were cleared in this case; an assistant placed one finger on the nostrils, so that the cartilages of the apex and the alæ might not be encroached upon. The best plan is to cut right down in the mesial line, and then to dissect away the diseased mass, first from one side and then from the other, keeping the two sides as like as possible to each other. He had been in the habit of operating, and had removed in this way a great many tumours, without any unpleasant symptoms following. It might be supposed that after removal of the integuments cicatrization might be very slow, and that the cicatrix would be discoloured; in this they would be agreeably disappointed, the healing process going on very rapidly: the scar may remain for a short time a little red and tender, but it ultimately comes to resemble closely the surrounding skin. The countenances of these patients are generally of a rubicund cast, which is so far favourable as regards the appearance afterwards."

In only one case had Mr. Liston been called on to perform a second operation. In that case incipient disease in the alæ was left, and in the course of ten years it had acquired such dimensions as to require removal.

GLASGOW ROYAL INFIRMARY.

FRACTURE OF THE NECK OF THE THIGH-BONE EXTERNAL TO THE CAPSULE.

Mr. Douglas has made some observations in the last number of our contemporary of Dublin,* the object of which is to demonstrate the occurrence of complete bony union of the neck of the thigh-bone, external to the capsular ligament. He relates two cases, but as most surgeons are not disposed to question the fact, one will be sufficient for the purpose.

Case. "An elderly man was admitted into the surgical wards of the Glasgow Royal Infirmary, on account of fracture of the neck of the femur,

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* March, 1837.

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external to the capsule. His limb was put up in Desault's splints, as is the constant practice in that hospital in all fractures of the thigh, and at the end of six weeks it was found firm. Still on rotation a crepitus was perceived at the inner part of the thigh-bone, and a suspicion being excited that all was not right, the splints were re-applied, and after a considerable time he was dismissed, because able to walk, although this crepitus had not disappeared. Shortly after this he was brought up to the wards of which I had charge, as physician's clerk, *in articulo mortis*, it was said from cholera, and died immediately after being put to bed. Learning that this was the same individual who had been above stairs with the fractured thigh, I speedily possessed myself of his femur, the state of which is as follows:—

The bone has been split into four pieces, the neck being detached from the shaft immediately beyond the inter-trochanteric lines, and depressed about half an inch below its proper level, though still retaining its natural obliquity. The greater trochanter is split from above and before downwards and backwards, and the loose portion is thrown a little inwards upon the neck. The lesser trochanter is drawn a little upwards and forwards. The fractured surfaces of the neck, shaft, and great trochanter, are firmly united by bone, except at the top of the great trochanter, where an opening exists between the two pieces, leading downwards into the medullary cavity. The trochanter minor is supported by a buttress of new bone, to which it is connected by ligament only, and on which it is still moveable. It was this motion which produced the crepitus after the other fractures were united, and led to the re-application of the splints. The preparation is preserved in my museum, and bears a striking resemblance to the specimen figured by Mr. Colles in the Dublin Hospital Reports, vol. ii. fig. 3, only that the neck is not driven across the shaft."

Western Lying-in Hospital.

On the Length of the Umbilical Cord and its Mechanical Influence upon Parturition.*

This is a paper of a statistical character, and a very good one. The author, Dr. Churchill, physician to the Western Lying-in Hospital, first notices the different, indeed contradictory, statements of preceding writers, with respect to the length of the umbilical cord. These statements we need not advert to, but content ourselves with the facts collected by the industry of Dr. Churchill himself. We will not, however, exclude two tables which he introduces, founded on the observations of Adelmann, and Henne.

Out of 49 cases Dr. Adelmann found that

In	3	the length of cord was	14 inches.
	6	.. ..	15
	12	.. ..	16
	1	.. ..	17
	17	.. ..	18
	4	.. ..	19
	5	.. ..	20
	1	.. ..	21

Out of 130 cases Professor Henne found that

In	1	the length of cord was	13 inches.
	7	.. ..	15
	2	.. ..	16
	4	.. ..	17
	10	.. ..	18
	8	.. ..	19
	16	.. ..	20
	11	.. ..	21
	21	.. ..	22
	9	.. ..	23
	13	.. ..	24
	8	.. ..	25
	3	.. ..	26
	4	.. ..	27
	4	.. ..	28
	1	.. ..	29
	2	.. ..	30
	3	.. .	31
	1	.. ..	32
	2	.. ..	34

We now proceed to Dr. Churchill's

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* March, 1837.

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own investigations. He has had the funis measured in every case attended from the Lying in Hospital, and the following are the results. Out of 212 cases, he found that—

In 6	the cord	measured	12 Inches.
1	..	..	13
7	..	..	14
7	..	..	15
15	..	..	16
4	..	..	17
75	..	..	18
10	..	..	20
4	..	..	21
9	..	..	22
49	..	..	24
2	..	..	26
5	..	..	28
1	..	..	29
8	..	..	30
1	..	..	34
5	..	..	36
1	..	..	46
1	..	..	48
1	..	..	54

Thus, he remarks, out of 391 cases, there occurred six of one foot long, and none under that length. The length which occurred most frequently was eighteen inches, and the next in frequency two feet; so that the estimates of authors are not quite correct. There is but one example in the whole number of a cord exceeding forty-eight inches.

"We may conclude, I think, that cords only ten inches long must be comparatively very rare, (although I have quoted the record of four such,) since not one occurred out of 391 cases. Now, as to the practical effects of these unusually short cords, it should be borne in mind, that (in head presentations) as soon as the breech passes through the lower outlet, all stress upon the cord may be and is taken off by the child's lying with its abdomen close to the vulva; and that the length required is such as will reach from the insertion of the placenta to the vulva, and from the breech of the child, when at the vulva, to its umbilicus. A cord of this length will, it is clear, allow the child to be born safely. What, then, is this length? I have recorded four observations of different authors, in the former part of this paper, of children being delivered without accident, whose cords were only ten inches long. But suppose in these cases that the placentæ were not situated at the most distant point of the uterus, that they were inserted into the side instead of the fundus, we may allow three inches more as the limit of the length necessary, and finally conclude, that a cord of thirteen inches long will always suffice for the delivery of the child, and that one of ten will also, under favourable circumstances. This calculation entirely refutes the notion of delay in labour arising from this cause, unless, at least, the cord be under ten inches, and I am not aware of any example of this being on record."

Out of 190 cases, the cord was twisted round the child's neck in 52. The shortest cord which was coiled round the neck was eighteen inches. This occurred but twice in seventy-five cases. It was never under two feet when coiled twice round: nor under three, when coiled three times round. It was coiled four times round in one of three feet; and four times in one case of fifty-four inches. Whenever the cord exceeded two feet in length, it was generally round the neck. Deducting the length of the coil in the *shortest* cord, thirteen inches will still be left, which have been already shewn to be sufficient for delivery. The coiling of the cord round the neck seems the consequence of the length of the funis, and the number of coils is proportioned to that length. On the whole then the evil consequences which authors have set down as likely to result from this circumstance, may be deemed imaginary; and the untwisting of the coil which has been much recommended, difficult as it often is, impossible as it sometimes is, in the majority of cases is really unnecessary. The cord should in all cases be drawn down a little, to relieve the stress on it, and that is usually all that is required.

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KENT AND CANTERBURY HOSPITAL.

CASE OF TYPHOID FEVER, ACCOMPANIED BY A DISEASED STATE OF THE BLOOD, AND GIVING RISE, AMONG OTHER LESIONS, TO APOPLEXY OF THE SPLEEN, AS ALSO OF BOTH LUNGS; TO STAINING OF THE ARTERIES; AND THE FORMATION OF SEMI-ORGANIZED CONCRETIONS ON THE PULMONARY VALVES. By JOHN M'DIVITT, M.D. Physician to the Kent and Canterbury Hospital.

We have great pleasure in inserting the report of this interesting case. It has been transmitted to us by Dr. M'Divitt, a gentleman of very high professional attainments, from whom we hope to receive future contributions.

Case. On Friday, the 10th of June, a considerable time after the regular hour for admission, a patient was found in the waiting-room of the Kent and Canterbury Hospital. He had been brought from Whitstable, a distance of eight miles, and was so much exhausted, and apparently in so dangerous a state, that he was immediately admitted under the care of my colleague, Dr. Chisholm. It appeared that he had been ill nearly six weeks, and he now presented all the symptoms of typhoid fever. He continued perfectly rational until the period of his death, which took place on the seventh day after entering the hospital.

Inspection twelve hours after death.—The body was much emaciated, and there was very considerable cadaverous congestion of back. No petechiæ were visible. The *dura mater* adhered with unusual firmness to the bones of the cranium. The longitudinal sinus was distended with blood, and a great number of large blue veins ramified over the surface of both hemispheres. The arachnoid had lost its transparency, and beneath it was diffused a layer of gelatinous-looking substance, the thickness of which was much increased between the convolutions. The whole substance of the cerebrum and cerebellum, particularly of the former, was highly vascular, presenting, on being cut into, innumerable bloody points, from which oozed out a thin clear red fluid. The ventricles contained each about a drachm and a half of a similar fluid, and between three and four drachms were found in the base of the skull.

The abdomen was now opened, and the vessels of the omentum and intestines were seen beautifully injected with blood of a bright scarlet colour; but as it was becoming dark, the skin and abdominal muscles were drawn together by a suture, and the dissection deferred until half-past seven o'clock on the following morning. On resuming it at this hour, the liver was found to be rather enlarged, but its structure was healthy. The gall-bladder contained about three drachms of green bile. The spleen was much enlarged, exceedingly soft, and permitted its capsule to be separated with the greatest ease.—The septa could hardly be distinguished, the whole appearing one almost uniform mass of soft black blood.—Both kidneys were likewise considerably larger than natural, and felt at the same time soft and flabby. On the surface of the left was discovered a cyst, nearly as large as a marble, containing a transparent melicerous fluid, and sinking deep into the substance of the organ. An incision into the right, divided two similar but smaller cysts, of an irregular oval shape, which were separated from each other merely by condensed cellular substance, while the inner surface of each was deeply furrowed with longitudinal grooves. The stomach contained merely a little mucus. Its lining membrane was slightly thickened, and rather soft, and could be easily separated from the middle coat. Its larger extremity and centre presented several patches (three as large each as a shilling), of punctuated, violet-coloured inflammation, together with, here and there, elevated dark stripes, varying from half an inch to an inch and a half in length, and running in the direction of the pylorus. Near this opening, and between the middle and innermost coats, ramified a small artery distended with scarlet blood, along the trunk and branches of which were observed ten or twelve

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rounded patches of extravasation, varying in magnitude from the size of a pin's-head, to that of a small pea. The coats of the intestines presented an immense number of beautifully injected vessels of a clear red colour. The intestines themselves were nearly quite empty, and their mucous membrane was healthy throughout. The cæcum was not of larger calibre than the colon. Its middle coat was imperfect, permitting, in two or three places, the lining membrane to protrude between the fibrous fasciculi, pushing out the peritoneal coat, and thus forming thin transparent pouches, one of which, nearly as large as a pigeon's egg, contained a small ball of fæculent matter. The urinary bladder was empty and contracted.

The pulmonary and costal pleuræ on both sides of the chest adhered firmly together. Both lungs appeared very large, and did not subside when the chest was opened, each contained several masses of dark clotted blood, varying from the size of a walnut, to that of a small fist. On cutting them open, some appeared to consist solely of dark grumous blood, while in others, portions of the pulmonary substance half broken down were distinctly visible. Two of the largest masses, situated one in the upper lobe of the right lung, the other partly in this, and partly in the middle one, both of which adhered together round the circumference of the mass—contained in their centre cavities half filled with a dark greenish putrilaginous fluid, such as blood is converted into by putrefaction. The surrounding pulmonary substance was soft and ragged, and in a state of incipient gangrene. Not one of these masses had regularly defined outlines. Portions of them thrown into water were found to float upon the surface. Fully one-sixth part of the posterior and inferior lobe of the right lung had an ash grey colour, varied with reddish streaks, felt exceedingly firm, and presented, when cut into, an imperfectly granulated appearance. Pieces of it thrown into water, sank readily to the bottom. The bronchial ramifications throughout both lungs were much dilated, and contained a small quantity of muco-purulent matter. Their lining membrane was evidently thickened, and presented, here and there, minute violet-coloured spots. The bronchial glands were much enlarged. The pericardium did not contain any fluid. The heart was very soft, and easily lacerated, and, on cutting it open, there oozed out from the divided vessels a quantity of clear red fluid, exactly similar to that which had escaped from the incised brain. The left auricle and ventricle were both empty, and their lining membrane was stained of a bright scarlet colour, which was found to be continued, without the minutest interval, throughout the whole aorta, and its branches, as far as we were permitted to examine them. In the majority of these, the tint was somewhat lighter than in the grand trunk, but in both the internal iliacs it was even deeper, and in each of them was found a small soft clot of dark blood, while all the rest, as well as the aorta itself, were quite empty. The staining, which extended over the whole circumference of the arteries, penetrated into the substance of their middle coat, and could not consequently be removed by sponging, although it was certainly diminished thereby. There was no perceptible thickening or vascular injection of the arterial coats.

The right auricle and ventricle were also empty, and their lining membrane was just perceptibly stained. The aortic, mitral, and tricuspidal valves were natural in structure, as also were those of the pulmonary artery; but to the free surface of each of these last was attached a semi-organized, irregularly nodulated concretion, the central surface of which (if I may so term that opposite to its attached one), presented a sort of cauliflower appearance.—These concretions, or vegetations (for they seemed to partake of the nature of both), nearly filled up the calibre of the artery; and on stretching one of them, so as to separate it partially from the valve, three or four minute and slender vessels were seen to form the bond of its attachment. After these points had been examined, there was found, lying in the ventricle, a smaller mass

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of vegetations, similar in appearance to those adherent to the valves, from one of which it had evidently been separated in the act of opening the artery, for the point of connexion was still distinctly visible. It presented, when cut into, an appearance resembling that of medullary sarcoma, but it was rather more dense, as well as firmer in its structure. The lining membrane of the pulmonary artery was in every respect perfectly healthy.

Mr. Williams, surgeon, of Whitstable, who had attended the patient previously to his entering the hospital, kindly furnished me with the following particulars.

Bright was 46 years of age. During the last five years of his life he had been employed as a "navigator," namely, in cleaning out and deepening the harbour, an occupation which is very laborious, and which requires those engaged in it to stand up to the knees in water and mud. The men thus employed usually drink very largely of beer, both during, and after the hours of labour. Bright, who had been in the army, where he had acquired habits of intemperance, used frequently to get intoxicated, and in that state to pass the night in the open air. Early in May he was attacked with rigors, followed by feverish heat, and an acute pain in the right side. He gave up his work, and confined himself to bed, but did not call in medical assistance until ten days afterwards, at which time he was found by Mr. Williams labouring under pyrexia, attended with short difficult respiration, cough, scanty yellowish expectoration, and well-marked dulness over right side of chest. He was bled largely from the arm, blisters were applied to the chest, and the system was speedily brought under the influence of mercury. Under this judicious treatment, the symptoms rapidly abated, and the patient, in little more than a week, was able to walk about, and appeared convalescent. He now altogether withdrew himself from medical treatment and control, yet was he not able to resume his employment, but continued to go about the village, drinking rather largely, and taking, as it would appear, very little food. This mode of life he persisted in up to the very day of his admission into the hospital, namely, during a period of nearly three weeks.

Remarks. The history of this highly interesting case enables us satisfactorily to account for the very numerous, and varied morbid appearances discovered on dissection. These may be divided into three groups, distinguished from each other by the probable dates at which they severally originated.

In the first group may be classed those which must have existed, and been increasing during a period of several months, perhaps years, viz. the dilatation of the bronchial tubes and thickening of their lining membrane, the adhesions of the pleuræ, the enlargement of the bronchial glands, the renal cysts, and the protrusions of the mucous membrane of the cæcum between the imperfect fasciculi of the middle fibrous tunics.

To the second group belong those morbid appearances, the origin of which is clearly referrible to the attack of illness experienced by the patient between five and six weeks prior to his death. These are, the solidification of a portion of the inferior lobe of the right lung, its ash-grey colour varied with reddish streaks, and also its imperfectly granulated appearance when cut into, being the ordinary results of acute pneumonia.

The last group comprehends a very numerous and varied train of lesions and morbid appearances, all of which must date their origin subsequently to the attack of pneumonia, and some of which could not have existed more than a few days, perhaps hours, before death; they are, the venous congestion of the brain; the injection of its vessels with a clear red fluid; the effusion of a similar fluid into the ventricles, and into the base of the cranium; the opacity of the arachnoid, and the effusion beneath it of a layer of gelatinous-looking substance; the muco-purulent matter in the bronchial tubes; the patches of violet-coloured inflammation in their mucous membrane; the apoplectic state

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of the lungs; the vegetations growing from the pulmonary valves; the clear continued staining of the lining membrane of the heart and arteries; the striped and punctuated inflammation of the gastric mucous membrane; and the universal injection with a clear red fluid of the vessels of the intestines.

The spleen had, in all probability, been enlarged for a long period antecedent to the patient's death,* but the conversion of its substance into a putrilaginous mass must have taken place subsequently to the attack of pneumonia, and was, no doubt, like several of the other symptoms above enumerated, dependent upon a diseased state of the blood. Was this state the cause, or was it merely a consequence of the typhoid fever under which the patient evidently laboured at the time of his admission? I apprehend that it was neither the one nor the other, but simply an accompaniment, originating in the same causes which produced the fever itself, and constituting in fact one element of the fever. This is a highly interesting question, and as such deserves to be minutely considered. Happily the history of the case throws much light upon it, and enables us to come to a tolerably satisfactory conclusion respecting it. The patient, subject for several years to repeated attacks of bronchitis, engaged in a laborious and unhealthy employment, grossly intemperate in his habits, passing often, while intoxicated, the whole night in the open air, and taking, for days together, scarcely any substantial food—had an attack of pneumonia for which no remedies were employed till after the lapse of ten days. By judicious treatment, however, the disease was in a great measure subdued, but the patient, before his recovery was established, abandoned himself to his old habits, and in consequence speedily became affected with typhoid fever, which went on increasing until the period of his death. Here were a number of causes well calculated to affect at once both the nervous and the sanguineous system, and accordingly there is no ground for supposing that the affection of the one preceded for any considerable length of time that of the other. This is at variance with Dr. Steven's theory of fever, which, I am convinced from numerous other observations, is founded on too partial a view of the phenomena of the disease. I believe also that Dr. Stevens has assigned too much importance to the condition, in fever, of the salts of the blood, and too little to that of the fibrine and albumen, both of which ingredients are very much diminished in fever before the colour of the blood becomes decidedly altered. Indeed I have satisfied myself by numerous experiments, the details of which I may at some future time lay before the profession, that upon the albumen depends, in a great measure, the form, and, to a certain extent, the colour also of the red particles. These, when the albumen is much lessened in quantity, lose their globular shape, break up, and, dissolved in the watery serum, ooze through the coats of the vessel, which are thereby stained of a bright red, more rarely of a violet colour. By many pathologists this staining is considered as the result of inflammation, an error successfully combated by Laennec as also by Bigot and Irousseau. In the present case, its dependence upon a diseased state of the blood was unquestionable, and the nature and appearance of the thin, clear red fluid, which oozed from the divided vessels of the brain and heart, and which manifestly contained little or no albumen, were in perfect accordance with the results of my experiments above alluded to. I would not, however, be understood as asserting that the changes undergone by the blood in fever, depend altogether upon deficiency of albumen: much must be attributed to the impaired influence of the organic system of nerves, from which the coats of the bloodvessels are supplied, and by the agency of which it is that the blood, while circulating, holds in solution a large quantity of

* Since the above was written, I have learned from the friends of the deceased that, several years before his death, he had suffered severely from intermittent fever.

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albumen, and maintains the attraction existing between it and the red globules.

I have represented the staining of the arteries as occurring prior to death. That such was the case, is demonstrated by the fact, that the whole circumference of the lining membrane was equally affected, thus shewing that the staining took place while the arteries were filled with blood; for the experiments of Laennec prove that imbibition does not extend beyond the part actually in contact with the blood. It is worthy of remark that the discoloration was deeper in the internal iliacs, in each of which a soft dark clot existed, while all the other arteries were empty.

The apoplectic state of the lungs, like that of the spleen, must be attributed to the diseased condition of the blood, together with diminished tonicity, and even consistence, of the solid fibre, both of which, again, owed their origin to the exhausting agents already enumerated. The undefined margins of the sanguineous masses contained in the lungs, as also the ragged gangrenous appearance of the surrounding pulmonary substance, constituted additional, and undoubted evidence of the extremely sunken state of the vital powers.

The inflammation of the gastric mucous membrane existed, it is probable, only during the very last days of life. I cannot learn that it gave rise to any symptoms indicative of its presence; but the patient, though perfectly conscious, was not in a state to give a just account of his sensations, and as little or nothing was swallowed, the absence of vomiting cannot be a matter of surprise. The small round patches of extravasated blood, existing along the trunk and branches of the distended artery, afforded a beautiful illustration of one very common course of mucous inflammation. Had the patient survived much longer, the numerous patches would, in all probability, have coalesced into one large patch, ulceration or sloughing would have taken place, and perforation ultimately ensued.

When the patient entered the hospital, he presented no visible marks either of difficult breathing or of impeded circulation. The state of the heart, therefore, was not enquired into, and it would now be fruitless to speculate what peculiar modification of sound the valvular concretions gave rise to. The origin, however, and manner of formation of these, may be ascertained with tolerable precision by carefully estimating the date already enumerated. Their degree of organization would indicate an existence of about eight or ten days, but as the natural powers of the system were very low, it is probable that a longer duration ought to be assigned to them. Their loose connexion with the valves, from which, by the rupture of a few slender chords, evidently bloodvessels, they would be readily separated, leaving the valves themselves entire, and in a natural state, proved that they were not primarily the result of vegetative growth, but had their origin simply in a deposition of the fibrine of the blood. Both these modes of production, no doubt, afterwards concurred to bring them to the size which they attained; and as they nearly quite filled the calibre of the vessel, it is manifest that the circulating fluid was greatly diminished in quantity, otherwise very prominent symptoms of impeded circulation must have presented themselves. It is highly probable that the apoplectic state of the lungs favored the fibrinous deposition on the valves, by causing a partial stagnation of blood in the pulmonary artery, and right side of the heart.

Canterbury, Jan. 1837.

Statistics of the Rich and Poor.*

Dr. Casper, some short time ago, published some tables, illustrative of the greater value of life amongst the married than amongst the unmarried. These tables Mr. Rickman shewed to be deceptive, and the inferences founded on them he proved to be false. Dr. Casper has lately published some fur-

* Med. Gazette, Feb. 18.

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ther statistical calculations on the lives of the rich and poor. But he has calculated from extraordinary data. For the lives of the rich have been estimated from genealogical trees, in which the young and the childless are frequently omitted; and the lives of the poor have been valued from that class which enters hospitals—the healthy, who never go into hospitals, and die of old age at home, being disregarded. When there are such palpable objections to the data, we need not be surprised at the extravagance of the conclusions. That they *are* extravagant will be admitted, when we read that, "compared with the poor, twice as many of the rich attain to the age of 70; three times as many the age of 85; and four times as many the age of 90. In other words, the average duration of the life of the rich is 50 years —of the poor little more than 32 years; a difference of 18 years of life between the prince and the pauper."

The fact is, that the lives of the select class are no doubt better than those of the lower orders. But they are not better to any thing like the amount insisted on by Dr. Casper. It is gratifying to the philanthropist to *know*, that the expectation of life throughout the entire population of England, in the year 1821, had reached that of the select class in the year 1786.

MEATH HOSPITAL.

CLINICAL LECTURES OF DR. GRAVES.*

Our friend Dr. Graves is a zealous, well-informed, and able physician. A series of his clinical lectures is now in the course of publication in the Medical Gazette. From those lectures we shall select a few points for notice, and we recommend the perusal of them in their native form.

1. *Epidemic Erysipelas.*

This prevailed in the wards of the Infirmary during the months of August, September, and October, 1836. The disease generally attacked the head, commencing in the scalp, or about the nose and cheeks; but in some cases, it appeared first on the nape of the neck, particularly in those patients who had been blistered in that situation during the course of fever. The fever which now prevails seldom abates in less than fourteen or seventeen days; and it was generally about the termination of the febrile excitement, and while convalescence was going on, that the erysipelas appeared. Usually, on the fourth or fifth day of convalescence, a change was observed in the patient, and the erysipelatous attack was ushered in by pyrexia. The erysipelatous inflammation was superficial, and did not affect to any extent the subcutaneous cellular tissue. There was little œdema, and there were no abscesses. There was a good deal of constitutional disturbance and fever, which, in most instances, terminated on the sixth day. In many instances, the erysipelatous redness spread in a perfectly symmetrical manner.

"I believe I was the first who directed attention to the fact, that when erysipelas commences at any point of the mesial line of the body, it is very apt to spread in a symmetrical manner. Thus, in the present instance, the inflammation commenced in the majority of cases about the nose, and then extended in a perfectly symmetrical manner over the forehead and down the neck; or when it appeared first on the nape of the neck, it travelled down between the shoulders with a very remarkable symmetry of extent and outline. Sometimes this precise correspondence did not exist; but I can assert that in more than two-thirds of the cases it was extremely well-marked. It appears, then, that this occurrence is not so very rare as my friend Dr. Johnson supposes. When I first noticed the fact of the occasionally symmetrical spread of erysipelas, he said it was an observation of very little importance, and that it was to be looked upon as a matter of mere curiosity, a phenomenon which a man would not see twice in the course of his life. I have, however, shewn it to

* Med. Gazette, *passim.*

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many of the students half a dozen times during the last two months."

We suppose we must succumb. We confess that, though we have seen a good deal of erysipelas, we have not had the good fortune to find it so symmetrical. But vision is much sharpened, when we do not merely look *at*, but *for* a thing. It is quite obvious that the fact is not very unfrequent, or our friend Dr. Graves could not shew it so often as he did to his pupils. Still we must regard it as rather a matter of curiosity, than of any thing else.

The treatment was simple, and founded on a consideration of the circumstances under which the disease occurred. No local measures were necessary. Tonics, narcotics, and stimulants were given, and were given at once. With the exception of one case, all were fortunate.

2. *Enemata of Tartar Emetic in the Delirium of Fever.*

Dr. Graves is very partial to the use of the solution of tartar-emetic in the delirium of fever. But sometimes it is very difficult to get the patient to take medicine. What are we to do then? In the first place, the emetic-tartar may be mixed with the patient's drink, which his thirst makes him usually crave. Secondly it may be given in the form of enema.

"The best way of administering it is to dissolve two or three grains of tartar-emetic in four or five ounces of mucilage of starch or isinglass, and inject it with the aid of a long flexible tube, so as to make the contents of the syringe pass high up into the bowel. In this way, you can secure all the good effects of tartarized antimony in overcoming the congestion of the brain, and procuring sleep. In all cases of alarming congestion of the head in fever, I have been long in the habit of using tartar-emetic in this way, if the stomach be deranged, and incapable of bearing it safely; and I can assure you that it is a most fortunate thing to have such a powerful resource in all cases of the kind. I have also not unfrequently given expectorant medicines in the same way, where from the state of the stomach, or the debility of the patient, the ordinary remedies could not be administered by the mouth with sufficient rapidity, or in sufficient quantity to produce the desired effect. In this way I have often given the infusion of ipecacuanha—a remedy of very considerable value, and not sufficiently appreciated by most modern practitioners. I may also remind you that vomiting, and all the benefits derivable from it, may be likewise produced in this way. Now where the stomach is irritable, and yet there exists a necessity for such remedies, it is a very fortunate circumstance to be in possession of a means of employing them without inflicting any injury on the stomach, and thus counterbalancing the good effects of the remedy by the injury done to the stomach. Of course the cases in which these expedients are required are comparatively rare, but the practical physician must be always prepared for such exigencies, and be provided with every means of meeting them."

3. *Thirst of Fever.*

Dr. Graves observes, very truly, that the thirst of fever lies deeper than the surface, and is by no means in the ratio of the dryness of the mouth and fauces. One man, with a moist tongue, will have great thirst, and another, with a dry tongue, will have little.

"There is one curious circumstance connected with the sensation of thirst in inflammatory diseases, which deserves attention. I lately attended a fatal case of metritis after delivery, in consultation with Mr. Hayden and Dr. Ireland. These gentlemen pointed out to me the singular fact, that the patient's thirst was instantly increased to an intolerable degree, by pressure applied to the womb."

It must be owned that an explanation of this fact is not easy. Every body is aware that slightly acidulated beverages assuage thirst. Dr. Graves is of opinion that acidulated bitter infusions are most powerful. A very light infusion of cascarilla, for example, acidulated with muriatic acid, is recommended by him.

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4. *Necessity of anticipating Cerebral Symptoms.*

Watch for head symptoms, says Dr. Graves. It is not enough to treat them when they come; they must be seen and met coming.

"You will find in patients who are about to have cerebral symptoms, a degree of restless anxiety, and a higher degree of energy, than accords with their condition; and they either do not sleep at all, or their sleep is broken by startings and incoherent expressions. When you speak to a person in this state, he answers in a perfectly rational manner; he will tell you that he has little or no headache; and were you to be led away by a hasty review of his symptoms, you would be very likely to overlook the state of the brain. If you inquire closely, you will find that he scarcely ever sleeps, or even dozes—that he is irritable, excitable, frequently incoherent, and muttering to himself. Under such circumstances, although there is no remarkable heat of scalp, suffusion of the eye, or headache, I am frequently led to suspect the supervention of cerebral symptoms, particularly about the ninth or tenth day of the fever (for it is generally about this period that cerebral symptoms begin to manifest themselves); and whenever I observe these premonitory indications, I never hesitate in taking proper measures to anticipate the evil."

Dr. G. has the head shaved, blisters it, gives tartar-emetic.

In other cases, the cephalic symptoms are ushered in by drowsiness. The patient seems otherwise well, but he sleeps—sleeps too much. About the ninth or tenth day, he begins to rave, and exhibits undoubted proofs of congestion and excitement of the brain. To be put on our guard is to be armed, in such cases.

Cerebral symptoms are often announced by the state of the respiratory function. Permanent irregularity of breathing and frequent sighing—respiration going on for one or two minutes at one rate, and then for a quarter or half a minute at another rate, bode no good.

BATH CASUALTY HOSPITAL.

DISSECTION OF THE LIMB, TWENTY-ONE YEARS AFTER THE EXTERNAL ILIAC ARTERY WAS TIED. By G. NORMAN, Esq.

On the 13th of September, 1813, Mr. Norman tied the right external iliac artery, after Mr. Abernethy's manner, for an aneurysm of the femoral artery, immediately below Poupart's ligament. The name of the patient was Hicks, his age 50 years, and his case was detailed in the 10th volume of the Medico-Chirurgical Transactions. The operation was successful, the disease never returned, and although there were several slight threatenings of apoplexy, and habitual swelling of the feet and legs, the man lived until February, 1834, when he was carried off by cholera. The dissection of the limb is contained in the twentieth volume of the Society's Transactions. It is of course highly interesting, as an addition to our stock of facts.

Dissection. "Independently of the appearances in the alimentary canal, characteristic of cholera, there was found some thickening and dilatation of the left ventricle of the heart, with deposition of bony matter in the mitral valve. The arch of the aorta was somewhat dilated, and presented several patches of ossific deposit.

The arteries of the right lower extremity were filled with wax injection from the lower part of the aorta; the injection passing so freely as fully to distend the extreme branches in the foot and elsewhere. The following are the principal results of the subsequent dissection.

The external iliac vein was pervious, and presented nothing calling for remark.

The external iliac artery was obliterated from the bifurcation of the common iliac to a point corresponding nearly to the lower edge of Poupart's ligament, and about one-eighth of an inch above the origins of the epigastric and circumflexa ilii arteries; it there again became pervious, and of equal size with the vessel in the opposite

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limb. The cord occupying the place of the obliterated vessel was of considerable size; the arterial coats perfectly distinct; and a probe introduced into its centre readily separated the adherent surfaces of the internal coat until it reached a point about an inch above Poupart's ligament, where all traces of the natural textures were lost, and replaced by a dense fibrous bundle.

About four inches below the crural arch, at the outer and posterior part of the femoral artery, was found a mass as large as a small walnut, composed of dense fibro-cellular substance: it involved the first part of the common origin of the profunda and external circumflex arteries, which, though obliterated, could be distinctly traced to the femoral. A portion of the profunda of about two inches was thus circumstanced; no injection having passed into it, and the remaining part of the vessel, which was of small size, being filled by the communication of its branches with other sources of supply.

The collateral circulation had obviously been mainly carried on by the ramifications of the internal iliac artery, which was nearly as large as the femoral. The manner in which it was affected may be described as follows.

1. The ilio-lumbar artery, of very large size, gave several branches to the lumbar plexus of nerves, descending in the substance of the anterior crural nerve as several elongated tortuous vessels communicating at the upper and outer part of the thigh with branches ordinarily derived from the external circumflex, and reaching to the fibro-cellular mass already noticed. Other ramifications of the ilio-lumbar anastomosed with those of the circumflexa ilii, and also by that medium, on the one hand, with the inferior lumbar arteries, on the other, with the external circumflex of the thigh.

2. The obturator artery was proportionally much the largest division of the internal iliac, and with its branches very tortuous. Immediately before its passage through the obturator foramen, it gave off a large branch communicating with the epigastric at a very short distance from its origin, and forming apparently the chief source of supply to the epigastric, which was itself comparatively small. Directly after its emergence at the upper and inner part of the thigh, many of its external ramifications, much enlarged and very tortuous, inosculated freely with corresponding branches of the internal circumflex, also of a large size.

3. The gluteal artery was of average size: some of its anterior branches emerging on the dorsum of the ilium from among the gluteal muscles united with ascending branches derived from the external circumflex of the thigh.

4. The ischiatic artery was enlarged, and communicated tolerably freely with the posterior divisions of the profunda.

5. The internal pudendal artery was also of unusual size, and numerous tortuous twigs, collectively of considerable capacity, derived from its external branches, established a communication between the internal iliac and various branches, chiefly of the internal circumflex at the upper and inner part of the thigh."

We see nothing in this dissection, which calls for remark. It tallies with the experience drawn from the observation of other cases, and with what anatomy would lead us to expect. The re-establishment of the circulation through the agency of the circumflex and epigastric arteries, corroborates the necessity for caution in applying a ligature too near those, or indeed very near any large branch, in the operation for aneurysm, or for wounds.

Guy's Hospital.

1. On the Situation and Structure of Malignant Diseases of the Liver.*

Dr. Bright has made some observations on this, by no means an uninteresting subject, in the Guy's Hospital Reports. They may be said to be illustrations of views first exposed in that able patho-

* Guy's Hospital Reports, No. 111.

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logist's Gulstonian Lectures, delivered in 1833.

He stated it then as his opinion, and that opinion he continues to hold, that probably the cellular membrane connecting parts is the chief seat of the "malignant" changes, which assume a variety of forms, owing to the structure of the particular organ, and owing likewise to the particular modifications to which the morbid action itself is prone.

"We are naturally led to suppose," he remarks, "that morbid changes so marked should constantly originate in some particular tissue: and if this be the case, I should be inclined to assign the locality of its invasion to the cellular membrane connecting the firm parts of other structures. The investigations of Dr. Hodgkin upon the subject of the anatomical structure of malignant growths serve to shew that, in many cases at least, a regular cellular arrangement is assumed by them; which he compares to combinations of reflected membranes, and ascribes to a peculiar power of growth arising from the diseased action. It has seemed to me probable, when considering the structures which he has so beautifully demonstrated, that the disease is first set up in the natural meshes of the cellular membrane, which is universally distributed; that the ordinary serous secretion of those minute cavities becomes changed to that more viscid character which approaches closely to the appearance of mucus, or the more firm opaque substance of the cerebriform cancer, or the sanguineous secretion of fungus hæmatodes, or the ink-like deposit of melanosis;—that this state of diseased action communicating from cell to cell, the natural cells become enlarged, and their parietes thickened, gradually involving in the disease whatever structure they encounter. Thus, in parts where the cellular membrane is loose and diffused, as in the ovaries, in which there is likewise a natural tendency to form cysts, from the peculiar functions of the part, these cysts become greatly distended: where, on the contrary, the surrounding parts are less yielding, they are compressed; and where they meet with other organs, these become involved, the disease intimately pervading their structure, possibly still introduced through the medium of the cellular membrane, whose natural, almost aerial secretion, becomes changed by contiguity into the same morbid secretion, whether it be mucous, cerebriform, sanguinolent, or melanotic: certain it is, that occasionally, in examining tumors of a much milder character — even common steatomatous tumors—the same structure, or one very much resembling it, may be traced in them, as in tumors of malignant growth; but the lobules of which they are composed give an impression that the cellular adipose membrane has, by a more partial and confined action, been secreting a fatty matter, instead of the peculiar deposits which mark the direful march of malignant disease.

'When we examine even ovarian cysts, where the circumstances allow the peculiarities of growth pointed out so beautifully by Dr. Hodgkin to display themselves in all their force and variety, we often find the mucous secretion not held within decided cysts, but lodged in cavities, whose crescentic margins seem to resemble the orifices which communicate between the cells of the cellular tissue, magnified and thickened by pressure and disease: but, at the same time, I am inclined to believe, that while much of the structure depends for its form on the natural meshes of the cellular membrane, in many cases additional cells are formed by newly-generated membranes; and that under other circumstances, even without the formation of such secreting cells, a peculiar vascular arrangement takes place, from which the malignant matter is rapidly deposited by numerous newly-formed vessels.'"

1. Dr. Bright proceeds to explain the variety of the malignant growths.—Thus, in one case, a glutinous secretion occupies and distends the cellular meshes, and displays little tendency to become organized. We see this peculiar form of disease in the structure about the pylorus, in the mamma, in the glands near Glisson's capsule, in the liver, in the kidney, and particu-

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larly in the ovaries. Dr. Bright conjectures that the pressure exercised by the effusion tends to diminish or obliterate the communications between the cells, and thus to account for the limitation of the morbid products.

2. In other cases, the cells are occupied with a matter of a more opaque colour and cream-like consistence as well as more capable of organization. This is the true "medullary sarcoma." The looseness of the deposit inadequately supports the vessels which shoot into it, and they are apt in consequence to give way. All the varieties of fungus hæmatodes are produced in this way.

"This medullary mass has within itself a vascular structure, exerting a kind of propulsive force: and though, while in very cellular parts, as those connected with the ovaries, we find it protruding itself into successive cells, which it distends, in imitation of the mucous and glairy secretion to which I have referred, yet in more solid parts, as the liver, we rather find it pushing the neighbouring parts aside, and involving and corroding the cellular structure, which quickly ceases to present a regular appearance of rounded cells, and, as the mass becomes softened and broken down, can only be traced in the form of ragged fibres pervading the medullary growth."

3. Melanosis appears to be very analogous to the medullary and hæmatode alteration.

4. While the growth of the genuine scirrhus is slower, and its deposit of a different kind, its seat appears to be the same as that of the preceding. The scirrhous deposition extends along the meshes of the cellular membrane, and pursuing diverging or radiating directions, it may assume more or less of a spherical form.

Such is the substance of the views of Dr. Bright. We are not sure that there is any thing peculiarly novel in them, for it has long been an opinion with some that the cellular membrane is the nidus of the malignant depositions.

Dr. Bright illustrates his views by three cases and two plates. The first case was one of soft malignant tubera of the liver—the second was an instance of hard malignant tubera of the liver —and the third was an example of the small diffused scirrhous tubera of the liver. Both the cases and the plates are apposite, but it does not appear necessary for us to notice them further. A sketch of the pathological views they illustrate seems to be all that is requisite.

II. Case of Hydatids Discharged from the Lungs.*

Ann Smith, aged 15, admitted into the clinical ward, under the care of Dr. Cholmeley, Dec. 16, 1835.

Her countenance was flushed; she felt pain about the sternum and scrobiculus cordis, upon taking a deep inspiration: her tongue was covered with a loose white fur; and her pulse was 120, full and jerking, but compressible.

The anterior part of the chest was healthily resonant, upon percussion, on the left side; as also on the right, above the mamma; but below this there was great dulness, extending to the inferior part of the axilla; and it was also observed posteriorly upon the same side, from the spine of the scapula downwards, where a flattening of the parietes was observed: the posterior part of the chest sounded well. Cavernous respiration, with shrill gurgling, and very distinct pectoriloquy, were heard just below the right mamma, and over a large space posteriorly. Mucous and sonorous rattle were heard over the greater part of the left lung. The impulse of the heart was great and diffused.

She had generally enjoyed good health, with the exception of some pain in the right side, occurring at distant periods, and attended with slight cough. She followed her occupation, as a servant, till eighteen weeks previously to her admission, when she was seized with pain in the chest, attended with expectoration and febrile disturbance, for which she was placed under medical care. As these symptoms diminished,

* Ibid.

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diarrhœa and profuse perspiration, most excessive in the morning, supervened, and continued till her entrance into the hospital.

Cupping, leeching, blistering, and demulcent medicines were employed. The pain subsided, but the other symptoms, conjoined with much action of the heart, continued.

"*Jan.* 1. Last night she complained to the nurse of being much worse; and at five o'clock this morning felt herself, suddenly, nearly suffocated. She said, she thought something had given way in her chest: and coughed up continually, in large quantity, a dark brown offensive muco-purulent matter, some portions of which were mixed with blood, and contained cysts, which were flattened and compressed, and had the character of hydatids: countenance anxious and depressed. She is bathed in profuse perspiration: bronchial wheezings audible at a distance: no pain in the chest: pulse 130: jerking, soft.—Pergat.

2. She has continued to expectorate matter of a lighter-brown colour, partly tinged with yellow, and containing cysts which are now distinctly recognised as hydatids (some of which are preserved in the Museum): the sputa in the last twenty-four hours amount to about two pints: she complains of no pain in the chest or region of the liver: tongue thickly coated: three loose motions: some fulness in the right hypochondrium.

Mucous and sonorous rattle, and moist crepitation, are to be heard above the inferior angle of the right scapula: below, there are cavernous respiration, loud gurgling, and a very clear resonance of the voice: these are heard also, but in less degree, at the anterior and inferior part of the right side, and at the lower part of the axilla: there is also gurgling in the subclavicular region, but no pectoriloquy. The bronchial rattles in the left lung continue.

Mist. Cretæ c̄ Conf. aromat. bis die. —Omitte medicamenta alia.

4. Matter expectorated much the same as to character, resembling eggs beaten up: the presence of bile in it is shewn by the chemical tests: the cysts, which are not entire, may be inflated: aspect improved: tongue less furred: pulse 120."

The sputa continued bilious, while the dejections were white. On the 12th of January, a cyst was found in the expectoration, and a part of one was again, and for the last time, discovered on the 18th of March. On the 20th of January, the expectoration began to diminish greatly in quantity, and on the 2nd of February, it was scanty and colourless. On the 28th of Jan. we are told that respiration may now be heard below the right mamma, and the dulness, on percussion, is diminished. The pectoriloquy is increased in intensity, but is much less clear.

On the 22nd of February, the report states, that there is still some gurgling below the right scapula, when she coughs; and at that time there is distinct pectoriloquy. Above there is good respiration, and normal resonance of the voice. The whole of the left lung is apparently healthy.

On the 1st of March, her health was nearly re-established, and she was free from cough. Two inches below the inferior angle of the scapula, and at the lower part of the axilla, on the right side, dulness still existed, respiration was heard at a distance, and there was ægophony.

On the 6th of March, there was a relapse, the cough and yellowish expectoration returning. By the 25th, however, the expectoration had ceased, and on the 2nd of April, she was discharged, looking very well. On the 10th of May she was again seen. She had grown remarkably fat. The crepitant rattle was heard when she coughed, but over a limited space.

This is, pathologically speaking, an interesting case. There can be little question that the hydatids formed in the liver excited inflammation in that organ, in the diaphragm, and inflammation and adhesion in the contiguous lung—that suppuration in the liver and lung, and ulceration through the diaphragm ensued—that the hepato-pulmonary cavity containing pus and hydatids opened into a bronchus—and finally that, by this means, the cysts

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and the matter were both expectorated, and the patient cured. The stethoscopic signs were both distinct and valuable.

III. Wound of the Ulnar Artery —Hæmorrhage Restrained by Pressure on the Radial and Ulnar.

A boy, aged 10, fell down and wounded the ulnar artery with a flint, just above the left wrist joint. The accident was immediately followed by a considerable arterial bleeding, which was restrained by pressure on the wound. The hæmorrhage, however, occurred upon various occasions, apparently whenever the bandages became loosened; so that the boy's health began to be affected by the repeated bleedings: and he was therefore brought to Guy's Hospital on the 4th of June, five weeks after the accident had occurred. At this period, a wound of considerable size extended obliquely, about three inches in length, from the styloid process of the ulna, upwards and outwards, towards the radius; being filled with large glassy granulations, presenting what is vulgarly called the appearance of proud flesh. So soon as pressure was taken from this wound, the bleeding immediately recurred; but not from any one point, so as to lead the surgeon to a bleeding vessel, but the blood seemed to flow from the whole surface.

Pressure, therefore, was again applied, by the dresser for the week; which was, however, required to be so strong, in order to stop the bleeding, that all sensation in the hand was soon lost: and it was therefore quickly removed, when bleeding as quickly returned. A tourniquet was then applied on the brachial artery, and Mr. Cooper was sent for.

Upon examination, it was found that pressure upon either the ulnar or radial artery singly did not check the hæmorrhage; but that a very slight pressure upon both, continued but for a short time, succeeded. Mr. Cooper, therefore, ordered a piece of cork to be placed upon the radial and ulnar arteries, about two inches above the wound, and to be confined in that situation by means of strips of adhesive plaster, with a degree of pressure not sufficient to prevent the flow of blood through them, but merely to diminish its volume: the hand, at the same time, was raised to an angle of 30° from the horizontal plane of his body, and directed to be kept cool, with evaporating lotion. This treatment most perfectly succeeded; and in the latter end of June he was discharged, perfectly well.

On the reputed Cure of Hydrocele by Puncture.

Perhaps there are few operations which have excited a greater stir of late, than the important one of puncturing a hydrocele with a needle. The removal of the superior maxilla does not seem to have excited half as much attention. Nobody appears anxious to lay claim to that, but surgeons are on the qui vive to enjoy the merit of proposing or performing the other.

Every body knows how easy it is to get up a crowd in London. A man has only to stand still and look at the moon with great intensity, and fifty other people will stand still and do the same. The principle of imitation is a very strong one in all animals, and more especially in man.

There is something very charming in being a discoverer. Like writing, it signifies little what you find, so that you find out something.

A book's a book, altho' there's nothing in't.

These truisms have been remarkably borne out by some late publications on the operation for hydrocele to which we have alluded. If any thing might be supposed to be established, it was that merely puncturing a hydrocele would not cure it. It was because puncturing would not and did not cure it, that the operations by incision, the seton, and injection were invented. All this seems very clear, to any one acquainted with the history of the treatment of hydrocele. Nay, oddly enough, analogy appears to lead to the same conclusion.

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Tapping for example, is not found to cure ascites, nor ovarian dropsy, at least it is not generally found to do so.

If tapping a hydrocele with a trocar will not cure it, it is not, à priori, likely that tapping it with a needle will. Reasoning does not seem to lead to such a supposition. But reasoning, is in medicine proverbially fallacious, and, in this instance, it would appear to have turned out so.

A short time ago, Mr. Lewis, brought before the public, his mode of treating hydrocele, by puncturing the tunica vaginalis with a needle. He made a single puncture. On withdrawing the needle, a drop or two of fluid oozed through the aperture, but gradually the remainder of the fluid, escaped from the cavity of the tunica vaginalis into the cellular membrane of the scrotum, and was there absorbed. Mr. Lewis proposed this as a palliative mode of treating hydrocele, but hinted that it might become a radical one.

The mode of operation is this.

"The operator should grasp that part of the tumour formed by the dropsy as much as possible apart from the testicle, so as to be able to give, by pressure, that tenseness to the skin which is necessary for the easy penetration of the instrument. This he should continue to do while he withdraws the needle, to which, in its passage out, he should give some rotatory motions *on its axis*. The removal of the needle will leave one drop of the liquid from the tunica vaginalis on the skin. The appearance of a drop of the fluid at the top of the little wound is the test of the operation being well performed. It is a demonstration that the bag has been perforated, and that its contents can find their way out; and should it not take place, another puncture must be made. Care must be taken to press in the needle perpendicularly, and to rotate it well after it has entered the tunica vaginalis; otherwise the opening will not admit of the passage of the fluid from it.

After the operation, a compress moistened with a discutient lotion, may be kept on the scrotum, and the patient may walk about or take rest, as best may suit him."

Not long after Mr. Lewis, Mr. King wrote a paper highly laudatory of Mr. Lewis's method. That paper displays what must certainly be deemed rather sanguine expectations. After describing the mode of puncturation, Mr. King remarks:—

"The phenomena which present themselves in a few hours are very remarkable:—The swelling begins to be less circumscribed, and to lose its tenseness, and the cellular tissue of the scrotum becomes gradually more and more infiltrated with the fluid which before distended the tunica vaginalis, and which in the space of from twenty-four or forty-eight hours, will have entirely changed place. In five or six days this infiltration disappears, and the patient is cured. These effects explain the process by which a cure is obtained."

Mr. King goes on to explain the rationale of the cure.

"It appears that the fluid very gradually oozes from the serous sac into the cellular tissue, making its way from one cell to another, till at last anasarca of the scrotum is substituted for the circumscribed dropsy of the tunica vaginalis. At the same time that the cellular tissue is filling, the serous sac gradually returns upon itself—an effect of the utmost importance as regards the ultimate result; for it appears that by this gradual contraction it loses more or less completely the condition necessary for the reproduction of the fluid, and yet remains inclosed, so as to exercise its proper functions. Probably the contraction is not wholly active—is not alone the result of the contractility of tissue belonging to the tunica vaginalis combined with the action of the cremaster muscle. We believe the pressure of the fluid may have something to do with it; for be it observed, the liquid, once out of the sac, presses on its exterior, and becomes an obstacle to its future distention. Each drop, as it oozes from the bag, becomes a force which helps to squeeze out that which is to follow: and thus has Mr.

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Lewis achieved a victory perhaps never before gained, by making the product of a disease battle against the disease itself. Once distributed in the cellular tissue, the fluid is quickly removed by the absorbents."

If Mr. King's ideas are strictly correct, there is a very great virtue in the gradual contraction of the tunica vaginalis. No doubt this is likely to assist a cure, but, so far as we can see, its merits are not such as to establish a very important difference, between the puncture by a needle, and that by a trocar. If mere puncturing could generally effect a cure, we doubt whether the plus or minus of time occupied in the exit of the fluid, would be of very great moment.

After Mr. King came Mr. Travers. This gentleman vindicated his claim to the invention, and described his mode of performing the operation. It is this.

"*My mode* of proceeding is to put the scrotum on the stretch, in front of the testis, by embracing it with the extended thumb and fore finger of the left hand; and placing the patient opposite a window on which the sun falls, or at all events a strong light, I command the view of the transparent bag so perfectly as to avoid veins and any point of accidental adhesion or thickening, which is always marked by a corresponding opacity. The punctures are made in a perpendicular direction and in quick succession, about equidistant from each other, while the tunic is kept tense by graduated compression. Of several cases thus treated, *some* have remained cured; others *apparently cured*, have *relapsed* after a fortnight or three weeks, and one after three months; but I do not consider this a fair criterion of the value of the practice, because from the shape and size of the acupuncture needles chiefly used in these cases, the points on which I believe the success of the operation mainly depends were not accomplished.—These are, a freer collapse of the sac by the removal of a sufficient portion of the fluid which the trochar puncture ensures, and the more complete diffusion of the remainder into the surrounding cremaster and cellular tunics, obtained by the multiplication of the punctures, while the tension of the sac is preserved.

On the third day the fluid is absorbed, and the two sides of the scrotum are uniform: indeed this is sometimes the case on the second day; but if the punctures are so small as not at once sensibly to reduce the bulk of the swelling, a single drop only exuding at each orifice, the reduction is generally much slower, or even fails altogether. Now every body knows that the drawing off of the fluid of a hydrocele through a canula is almost invariably followed by its reaccumulation, and it is not uncommon for elderly men, who are timid, or averse to injection, to call upon their surgeon to have the tunica vaginalis relieved of its contents once in a year or in two years."

Mr. Travers goes on to point out the bizarrerie of laying down the method in which a cure takes place, when it is by no means certain that there *is* a cure at all. Mr. Travers thinks, as most men of experience will, that the comparative merits of puncturation with a needle and with a trocar are not determined, and that the *radical* merits of the former are still more equivocal.

Mr. Lewis, in his reply to Mr. Travers, affirmed that many punctures are "not only useless but dangerous," a position in which we totally differ from him—and that they are "less likely" to succeed than a single puncture, a conclusion which is exceedingly dubious.

To this point then the matter has been brought. Mr. Lewis proposes one puncture with a needle as a palliative cure of hydrocele, and conjectures that it may be made a radical one.—Mr. Lewis considers himself the "inventor," because he first performed the operation between two and three years ago. Mr. Travers recommends several punctures, but speaks, having often operated, very doubtingly of the success of the plan.

In this stage of the business Mr. Keate made his début.

"While I do not mean," says Mr.

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Keate, "to intimate any doubt of the same ideas having occurred to each of these gentlemen without any knowledge of the other's theory or practice, or of any previous operation of the kind, I trust it will not be offensive to either of them if I assure you that the plan and the practice have been known and acted on for very many years by myself, and I dare say by others. By one other person I know it was performed I dare say *twenty years ago*, namely, by a friend of mine, who for some years practised as a physician in this town, and is now living in retirement in the country. This gentleman performed the operation on *himself*, as he was nervous about the injection, and fancied, as he said, that if he could convert ascites into anasarca, absorption from the cellular structure might cure the malady; and in his own case it was perfectly successful.

At his suggestion I tried it frequently, both at the hospital and in private practice; sometimes successfully, but more frequently the collection of fluid in the sac returned, and I generally found the patients impatient of the numerous punctures, and of the time required for the absorption. I remember talking to Sir Astley Cooper on the subject, and, as far as my recollection serves me, the plan appeared not to be new to him."

We can bear Mr. Keate out in two points; 1, we saw him try the plan six years ago, and we tried it then in three or four instances, and in two or three others subsequently, ourselves; 2, we have not happened to see the operation cure the hydrocele in any one.

On the whole we think it is pretty clear, that, as a mode of treatment generally to be depended on, for the radical cure of hydrocele, a single puncture, or many punctures may be looked on as a mere "matter of moonshine." Now and then a cure will take place, but too rarely and too uncertainly, to admit of any dependence being placed on it.

It must be regarded as essentially a palliative proceeding.

As such, its supposed advantages over puncturing with a trochar are:—1, its occasioning less pain;—2, its more effectual nature from the slower contraction of the tunica vaginalis.

As such, the advantages of puncturing with a trochar over it are:—1, *that* it is more speedy;—2, *that* it is less painful than many punctures, and probably not more painful than one. After all, it is doubtful whether the slow contraction of the tunic is of service,—and taking all in all, weighing the expedition of a trochar puncture, with the tardiness, and the uncertainty of a needle puncture, our own opinion is decidedly against the latter, even as a palliative mode of treatment.

While we say this, we do not mean to affirm that there are no cases in which it might be judiciously employed. But we are sure they are the exception, not the rule.

SALISBURY INFIRMARY.

CASE OF RECOVERY FROM THE INSENSIBILITY OF INTOXICATION, BY THE PERFORMANCE OF TRACHEOTOMY. By S. SAMPSON, Esq.

This case is contained in the last volume of the Medico-Chirurgical Transactions. It reflects much credit on Mr. Sampson, of Salisbury, and is physiologically, as well as practically, interesting.

Case. "Abraham Harris, aged 31, was brought to my house on the 31st of March last, in a state of complete insensibility from intoxication, the pupils being largely dilated, the breathing stertorous, and all voluntary motion having been lost for at least four hours before I saw him. The account given by those who came with him was, that he had attended a convivial meeting in the course of the day, at which he had drunk freely both of beer and brandy; his companions admitted that he had taken more than a pint of the latter, but it has since been ascertained that his glass was repeatedly filled up, without his knowledge, with white brandy, instead of water, so that it is impossi-

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ble to calculate what quantity of spirit he had actually taken.

I immediately used the stomach pump, and drew off between three and four pints of fluid, a great part of which appeared to consist of brandy; after which, tepid water with ipecacuanha diffused in it was several times injected into the stomach, and after a while withdrawn again. with a view to excite vomiting, and thus rouse the energies of the brain. Finding, however, that these means failed, a strong solution of salt in water, and afterwards the sulphate of zinc, were repeatedly tried, without any better result; but he became, if possible, more comatose, the countenance turgid, breathing more and more difficult; the pulse grew fainter, and was at last scarcely perceptible; at the same time the whole surface of the body was cold and clammy, and he was insensible to every kind of stimulus. As he was some miles from his home, I had him removed to the Infirmary, and called a consultation of the other medical attendants, who arrived in the course of half an hour; but as, in addition to the above symptoms, he had lost the power of swallowing, and every appearance indicated the rapid approach of death, nothing was ordered for him but a turpentine injection, there being no ground to justify a reasonable hope of recovery.

At this period it occurred to me whilst standing by his bed-side, that the comatose state in which he lay might not arise from apoplexy, but from torpor of the brain, in consequence of that organ being supplied with blood not duly oxygenated; for the shrill tone and extreme difficulty of respiration shewed the existence of collapse of the glottis, and imperfect transmission of air into the lungs, which might be accounted for by a paralysed state of the eighth pair of nerves and recurrent branches. With this view of the case I again appealed to my colleagues, and strongly urged that a trial should be given to the operation of tracheotomy; for I could not but hope that if mechanical respiration were carried on for a time, the blood might regain its proper stimulant properties, and restore the energies of the brain and nervous system. Upon their consenting to give him this chance, the operation was performed, without loss of time, by Mr. Andrews, under whose care, as surgeon for the week, the patient was now placed.

The trachea was no sooner opened than the distention of the veins about the head and neck subsided, the violent efforts of the extra-respiratory muscles ceased, and in about half an hour regular and easy respiration through the wound was completely established; at the same time the pupils became slightly sensible to the stimulus of light, and the pulse returned to the wrist. The immediate result of the operation being thus far satisfactory, nothing remained to be done but to give directions for the frequent removal of the mucus which appeared at the wound, and to keep the surfaces of the incision asunder until the integuments and muscular layers had become agglutinated to each other; this latter object was effected by means of a piece of strong spring wire, with a bow at each end of it, which, being introduced in a bent state, was allowed to expand, and the opening in the trachea was thus prevented from being covered by the muscles, even during the efforts of deglutition.

He continued perfectly quiet during the night, but had no return of consciousness until the following morning, when he gave us to understand, by signs, that he suffered from headache and soreness at the pit of the stomach; there was a tendency to sickness, and the tongue was coated with a peculiar whiteness, as if rubbed over with chalk. Moderate purgatives, followed by mild alkaline medicines, soon removed these symptoms, and a few leeches were applied to the throat, for the purpose of checking too high a degree of inflammation; after which no further treatment was required; but the wound being healed in about three weeks, he was discharged cured, and has continued up to this time in the enjoyment of perfect health."

We think there can be little doubt

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that the patient was dying of asphyxia, the result of the depressing influence of alkohol upon the brain and nerves. The opening made in the trachea facilitated respiration, by establishing an aperture, not muscular and regulated by nervous influence like the glottis. In such a case, were the symptoms still more urgent, and tracheotomy ineffectual, artificial respiration should, of course, be kept up. The effects of alkohol are transitory, and the view with which Mr. Sampson advised the operation is perfectly philosophical, and was, happily, successful.

MARY-LE-BONE INFIRMARY.

CASE OF RECOVERY FROM THE INFLUENCE OF OPIUM BY ARTIFICIAL RESPIRATION. By C. IRVING SMITH, Esq.

This case may be considered a valuable pendent to the one immediately preceding. It too is contained in the last volume of the Medico-Chirurgical Transactions.

Case. Jane H., aged 25, a stout young woman, was admitted into the St. Mary-le-bone Infirmary, on the 20th of July, 1828.

"At six in the morning, she was observed by one who slept in the same room, to swallow something from a cup, the remains of which was opium. She shortly after became insensible. At 10, A. M., she was brought in. At this time, her extremities were cold and livid; the lips and face of a dark lead colour, the pulse fluttering, and scarcely perceptible at the wrist. Respiring three or four times in a minute, with sighing.

The stomach pump was applied, and that organ was carefully washed out, first with water, then with dilute acetic acid; after which, small quantities of ammonia were injected, combined with brandy. The spasm of the œsophagus was so great, on attempting to introduce the tube of the stomach pump, as nearly to destroy it.

The patient was now (11, A. M.) evidently worse than at the time of her admission; so much so, that many doubted if she still lived. The hair was next entirely cut off from the whole head, and the head placed over the edge of the bed, several buckets of cold water were poured in rapid succession over it; the nostrils being at the same time stimulated with volatile alkali. The pulse now intermitted much at the wrist, at one time being 70 or 80 beats in the minute, and the next sinking as low as 7 or 8. Respiration had now nearly ceased.

The scalp was now rubbed with the liq. ammoniæ until the entire of it was vesicated.

11½, A. M., it was determined, as the only remaining chance, to try the effects of artificial respiration; there being at this time no pulse whatever at the wrist, and only a slight irregular action at the heart, indicative that life was not quite extinct.

The mouth and one nostril being closed, a pair of common bellows was applied to the other nostril, and the chest was in that way inflated, and alternately emptied by pressure on the chest and sides. This was continued for an hour, without intermission, at which time the heart seemed to be rallying, but if left to itself, it rapidly sunk again. An ounce of the ol. terebinth. was injected into the rectum. Bottles of hot water were applied to the chest, and sinapisms to the feet and legs.

The same treatment was continued till 2, P. M., with only very slight intermission. She was at this time so evidently rallying, that it was deemed safe to leave her.

She was again seen at 3, P. M., when she was found relapsing into her former state. Recourse was again immediately had to artificial respiration, which was continued till 5, P. M., at which time it was suspended, on account of the pulse having become regular, and her having made some slight attempts to move; and shewing evidence of pain on being pinched.

At 12, P. M., she became slightly sensible, and swallowed a little tea. She became eventually well; and has since married.

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It was curious to see the effects of artificial respiration in this case. The livid colour of the face and extremities, rapidly giving way to a more florid hue, on every inflation, and again as rapidly returning to its original colour, on being left for a few minutes."

Midwifery in the French Lying-in Hospitals.

Dr. Lilburn has communicated to the Medical Gazette an account of what he saw in Rouen and Paris. The following extract gives no flattering account of the state of midwifery in the provinces of France.

"Rouen.—The Hôtel Dieu, in this city, contains 600 beds. One ward is appropriated for women during their confinement, who are admitted by the physician, and kept as long as he thinks judicious (generally one month.) The woman, when in labour, is taken into a small room, and there delivered on her back, with the head and shoulders a good deal raised, in the presence of the pupils. Immediately after delivery she is carried to a room appropriated for her reception, and the infants to one adjoining. In that for the latter their little beds are arranged round the room with canopies; they are dressed in swaddling clothes, confined all but their arms. One woman had been delivered the day before I arrived with forceps (Baudeloque's). She had lacerated perineum, and laceration through the vagina into the rectum. The Interne, who accompanied me round the hospital, and very politely explained the whole progress of the case to me (bringing me specimens of the instruments then in use), said, that the accoucheur, in employing the forceps, although a very powerful man, and exerting the whole of his strength, had the perspiration running down his face, and was more than an hour in extracting. The ergot had been previously given, and the patient bled largely.

I remarked that the mischief might probably have been avoided by the patient lying on her left side, and by the use of the curved forceps, invented by Dr. Osborne, and modified since his time, as there was no deformity of the pelvis.

He told me that perforation of the head of the child, when necessary, was effected with a long sharp-pointed bistoury, and the brain removed principally by the operator's fingers!"

Clinical Cases of Morbid Growths from the Bones of the Face, and Observations on their Nature and Removal.

1. Case of Exotosis of the Bones of the Face. By Mr. Morgan. (Guy's Hosp. Reports, No. II.)

L. Shiel, aged 24, admitted into Guy's Hospital, Aug. 1, 1835, with a tumor on the right side of the face, which had commenced, when he was fifteen years of age, in the right nostril, and had subsequently gradually increased.

The whole right side of the face was occupied with the morbid growth, the right nostril being enormously expanded and closed by the enlargement of the tumor, which, from its size, completely concealed the eye on that side, and extended downwards into the mouth, being there connected with the palatine and alveolar processes of the right superior maxillary bone; projecting also forwards, so as to press the lip beyond the teeth, to the extent of two inches. The bones apparently implicated in the disease were the ossa nasi, superior maxillary bone, vomer, and the inferior turbinated and malar bones.

A lithographic sketch represents the tumor; the surface was irregular; the more prominent parts being situated under the right orbit, and opposite to the ala of the nose. They were slightly discoloured by inflammation; but the reddened surface of those projections indicated no approach whatever to the change in the condition of the vascular system, which evinces so frequently the local existence of a truly malignant disease. The patient complained of no pain—the general health seemed good

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—and, although he was much emaciated, that was probably from want of food.

The tumor being, throughout its whole extent, almost uniformly firm, and of a bony hardness, and sufficient time having elapsed, from its first formation, to give rise to malignant softening if the disposition to it existed, Mr. Morgan concluded, and his opinion was supported by that of his colleagues, that the disease was simple exostosis. He determined, then, to operate, which he did on the 6th of November.

"Desirous of ascertaining, in the first instance, the true nature of the disease, I made a crucial incision, between the most prominent points, over the right nostril; and, by means of a trephine, removed a portion of the tumor, which proved to be true exostosis.

A semilunar incision was then made, extending over the nostril, from the internal angle of the right eye to the centre of the upper lip. A similar incision was made on the outer side, commencing at the external angle of the eye, and joining with the other, at the lip. The integuments were then dissected from around the tumor, and a metacarpal saw was used for its removal; and as it was of a spongy texture, it offered little resistance to that instrument. No great quantity of blood was lost during the operation, the exostosis not being very vascular; and it was only found necessary to secure one vessel, a superficial branch of the transverse facial. All further disposition to hæmorrhage was easily restrained by pressure.

After the tumor had been thus removed, the integuments were brought together by the uninterrupted suture; a dossil of lint was placed over the wound, and confined by adhesive plaster; and over all, a light bread-and-water poultice was applied.

The patient bore the operation with great fortitude; and said afterwards, that he suffered but little pain, excepting when the first incision was made.

A section of the tumor proved that it was composed of an outer hard thin shell of bone, completely enclosing a morbid mass of spongy cancellated structure, devoid of all appearance of carcinomatous or fungoid disease."

There is nothing to detail in the progress of the case. The wound suppurated gently, and in April, 1836, when the Report was published, all discharge from the face had almost entirely ceased, hardly any exfoliation of bone had taken place, and the general health of the patient was restored.

II. Case of a Large Bony Tumor of the Face, removed by Spontaneous Separation. With Observations on some of the Functions of the Soft Palate and Pharynx. By Mr. Hilton.

The following case is interesting on physiological accounts. The separation of the tumor permitted the examination of the pharynx and palate, during respiration, deglutition, and speech.

Case. T. Moore, aged 36, in good general health, stated that "About 23 years ago, a little pimple, like a wart, appeared just under my left eye, close to my nose. I scratched off the head of this pimple; which formed a scab; and ever since there has been a growth from under that spot."

The tumor grew slowly, until it occasioned extreme disfigurement of the face. The turbinated and cellular apparatus on the left side of the nose were destroyed; the septum nasi was pushed towards the right side, so as nearly to obliterate the right nostril; and the left orbit was thrust outwards.

In a short time, the growth of the tumor displaced the inner wall of the orbit; and the globe of the eye, being then subjected to pressure, became the seat of most excruciating pain, though vision was very little impaired: the symptoms however continued; until, about 17 years ago, the globe, yielding to the pressure, burst, and gave exit to its fluid contents. The cicatrix of the cornea is still obvious, pointing out the part of the globe which gave way.

This yielding of the globe was attended with very little bleeding, but it produced almost complete relief from pain. He has subsequently been sub-

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ject to occasional neuralgic pains, following the distribution of the first and second divisions of the fifth nerve. The tumor did not extend backwards to the pharynx. His voice became nasal and that was all.

About six years ago, the tumor was observed to be somewhat loosened, and detaching itself by ulcerative absorption from the surrounding soft parts, the integuments being destroyed by its pressure forwards. This process was accompanied by copious suppuration, and occasionally by profuse arterial hæmorrhage, proceeding not from the vessels of the tumor itself, but from those of the adjacent structures about the situation of its origin, near the internal angle of the orbit. About eighteen months ago, several small irregular portions of bone came away, and these were followed, when the bands of skin ulcerated, by the separation of the whole mass. A very large chasm was, of course, the consequence. It was bounded *below* by the nasal surface of the hard palate and the floor of the left antrum: *above*, by the left frontal sinus and left half of the cribriform plate of the æthmoid bone: *internally*, by the septum nasi, which presented a general concave surface, with a small opening through it, at the lower part, communicating with the right nostril; and *externally*, by the left orbit. *Posteriorly*, it opened into the pharynx.

The roof, the outer wall, and part of the inner are now covered with granulations, more or less abundant, with here and there small portions of bone, denuded but not presenting any malignant character.

The tumor weighs fourteen ounces and three quarters. Its density is remarkable, the specific gravity being 1.80. Its greatest circumference measures rather more than eleven inches, and its least nine inches. The external surface is irregularly nodulated, and an uneven concavity exists at the posterior part. A section presents a very hard polished surface resembling ivory; and exhibiting lines, to the number of fifty, arranged in concentric curves, enlarging as they are traced from the posterior part. Dr. Hodgkin, who examined the tumor with accuracy, and details the results of that examination with scientific precision, does not deem it of a malignant character—a conclusion borne out by the history of the case, as well as by the general features of the morbid growth. By chemical analysis, the tumor was found to contain less animal matter, more earthy phosphates, and less carbonate of lime than ordinary human bone.

By a report dated July, 1836, the patient would appear to continue in good health, and the chasm of the face has a little diminished. Judicious surgical attentions may no doubt materially diminish the deformity.

We observed that the case was possessed of some physiological interest. The opening in the face exposes in their perfect state and natural position the pharynx, and the hard and soft palate, and exhibits, of course, the actions of the soft parts in respiration, deglutition, and articulation. We will extract a few of the more prominent circumstances.

1. *Respiration.* The opening in the face represents an exaggerated nasal aperture.

a. During quiet and unconstrained breathing, *with the lips closed* so that the air must pass through the nose and opening, there is not any perceptible movement upwards of the soft palate; nor does the pharynx advance. The latter remains perfectly still; and the former, we may conclude, as it disappears in the descending direction, is closely adapted to the back part of the mouth, so as to leave, for the air passing to and from the larynx, a free and spacious canal.

When *the lips are slightly separated*, so that the respiration is in part carried on through the mouth, the soft palate is seen to be carried, or rather, perhaps, drawn upwards and backwards at each inspiration, and at each expiration again to decline; the pharynx continuing almost at rest, but having a slight disposition to advance.

Upon taking a full inspiration through the mouth, the palate is directed more completely upwards and backwards, and adapts itself to the advancing pharynx.

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This adaptation remains until the expiration has nearly terminated: but it should be remarked, that the sides of the pharynx do not, even in this case, approximate so much as during deglutition.

From these observations we may conclude, that during hurried or forced inspirations and expirations made with the mouth widely opened, nearly all, if not the whole of the air which enters and escapes from the pharynx and larynx is excluded from the nose, and takes its course through the mouth."

b. In smelling there is no perceptible movement of the palate nor of the walls of the pharynx.

" If the odoriferous particles employed be very *pungent*, a different result takes place; as was observed in the following experiment:—A piece of wood, previously dipped into liquor ammoniæ, was held within the large cavity in the face. The patient did not smell it, nor did it make him sneeze; although it created a sensation of heat in the nose. This sensation of heat, gradually extending into the pharynx, its parietes involuntarily advanced, and the palate was raised so as to preclude the further descent of the ammoniacal vapour.

The same co-aptations between the palate and pharynx occur if the scent be in any way *disagreeable*."

c. " In holding the breath, as it is termed, or forcibly retaining the air in the chest, either with the lips closed and the tongue depressed; or with the tongue raised and adapted to the concave surface of the hard palate, and the lips separated; or, lastly, with the superior and posterior portion of the tongue applied, by great voluntary effort, to the concave commencement of the soft palate, the lower jaw being depressed and carrying with it the genial portions of the genio-hyo-glossi muscles; the pharynx advances, and the palate is much raised, presenting a convex surface upwards, undulating, with a somewhat tremulous motion, upon the subjacent column of air."

Mr. Hilton observes that the closure of the glottis alone, can retain the air within the chest but for a very short time, and that the assistance of the soft palate, as well as of the tongue and lips and jaws, is highly useful.

d. Sneezing consists of inspiration through the mouth when the palate is raised, and of expiration through the nose, when the palate is depressed. But if sneezing happens many times in quick succession, so that the palate has scarcely time after its elevation, during the oral inspiration, to descend to the back of the mouth before the air returns from the chest, the palate is then seen violently agitated by the air in its ascending direction, being at that time obliquely placed with respect to the expired air, so that a portion of the air passes through the nose, and a portion through the mouth, giving the coarse tearing sensation to the palate, and flapping motion of the lips, experienced in the imperfect attempt to sneeze.

2. *Deglutition.* When the mouth is open to receive the food, the palate is raised, but not so completely as in full oral inspirations: the sides of the pharynx also approximate, but not so closely as on drawing the breath inwards: the posterior part of the pharynx advances but slightly. Directly the food, either solid or fluid, is placed in the mouth, the palate descends, and continues, during the detention of the food, closely adjusted to the back part of the mouth, the pharynx remaining perfectly quiet. These conditions are to be observed during the process of mastication, performed with or without food in the mouth. Extreme lateral movements of the jaw encroach upon the pharynx but very slightly; and in the ordinary lateral motion, there is no difference to be observed in its capacity. Immediately antecedent to that part of the process of deglutition occurring in the passage of the food between the fauces and pharynx, or when the food is passing backwards over the upper opening of the larynx, the palate is carried *completely* upwards and backwards, and the pharynx advances, the sides of which more especially approximate. At this time the thyroid cartilage rises. These movements of the larynx and palate occur nearly simul-

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taneously; those of the palate having but a momentary precedence. The palate and pharynx being now nicely adjusted, their common surface presents, from above, a hollow cone, in consequence of the partial descent of the palate, but so closely is their adaptation maintained during the deglutition, that not the slightest portion of the passing substance is perceived above the palate. At that moment the pharynx is indeed divided into two distinct cavities; one at the upper part common to the nose and pharynx, the other open to all the apertures below the palate. As the fluid or food passes into the lower part of the pharynx, the upper portion recedes or retires from the palate; the soft palate falls; and, last in this succession of events, the larynx, as is indicated by the motion of the thyroid cartilage, descends.

3. *Articulation.*—On this head, Mr. Hilton's observations are imperfect, and it is not necessary to go into them.

On the whole the case is interesting, and Mr. Hilton deserves the thanks of physiologists, for seizing the opportunity of ascertaining, by actual observation, the changes which occur in the soft palate and pharynx during the performance of deglutition and of respiration. The mechanism is both beautiful and perfect, and though reasoning has anticipated much of what Mr. Hilton has seen, yet philosophy is always under obligations to those who add positive facts to her stores.

We had intended to have entered fully on the subject of the tumors of the superior maxillary bones, and on the operations required or performed for them. But the want of space compels us to pause, and to defer till our next Number the consideration of this subject.

Clinical Observations of the late M. Dupuytren on Contusion, Compression, and Displacement of the Heart.

The following fragments from this illustrious surgeon's lectures, are extracted from a monthly journal, just established by our intelligent friend, Dr. Bureaud Riofrey. This gentleman is a French physician now resident in London, whose liberality of feeling and cultivated understanding are highly estimated by all who have the pleasure of his acquaintance. His aim, a laudable one, is to lay before the profession of this country the valuable facts and memoirs published on the Continent, and to cement those generous bonds of brotherhood which unite the lovers of science and philosophy, whatever their country or their clime. Country, indeed, and clime are distinctions which, in this sense, philosophy does not admit, and which the natives of France, to their honour be it spoken, have often openly disavowed. Desgenettes and Larrey extended to the British soldier, whose bayonet had been pointed at them, the same zeal, the same science, and the same humanity, with which they assuaged the wounds of their own comrades. Such conduct was worthy of them and the profession, a profession which, above all others, is consecrated to the service of the human species.

We would willingly aid Dr. Riofrey in his attempt to draw more closely the ties which unite the children of France and England. In arts, if not in arms, in civilization and refinement and all that adorns and ennobles humanity, the two first nations of this Globe—scarcely separated by nature—sprung from common parents—and calculated, if not intended, to diffuse by their union the blessings of order, of liberty, and of science—he must be devoid of every spark of enthusiasm and of generosity, who would not hail their alliance as a happy epoch in their history.

The Journal before us, established with this view, and conducted in this spirit, is termed the Continental and British Medical Review. We wish it all success, and we shall direct the attention of our readers, from time to time, to its contents.

The fragments from the Lectures of M. Dupuytren on some of the lesions of the heart, are not unworthy of at-

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tention. They embrace conditions or affections of that organ not generally noticed by pathological writers.

1. *Traumatic Compression of the Heart.* J. L. Petit, some time since remarked, that if the fractures of the sternum were ill united, there resulted a very uncomfortable palpitation of the heart, owing to the pressure of this organ by the displaced fragment. In a case of this kind, spitting of blood has also been occasioned. Dupuytren, who had deeply studied the diseases of the heart, found these observations of Petit's very correct, and had various opportunities of ascertaining the fact. Nevertheless he had seen these palpitations gradually disappear, under the influence of lowering treatment, sometimes merely by the assistance of nature. The possibility of this latter phenomenon would be easily admitted, if we recall to mind that bony fragments introduced in the chest, cease to injure the thoracic organs, as they are blunted by the repeated impulsions of the organs with which they are in contact.

The compression of the heart may also be caused by the effusion of the blood in the pericardium, which may cause instant death. (Scarpa.) Or else by the introduction of a foreign agent which remains in the neighbouring parts. The following extraordinary case was related by Dupuytren in one of his lectures:—

An officer in the army labouring under great distress of mind had resolved to destroy himself: to accomplish this purpose he thrust two long hair pins in the region of the heart. Serious thoracic accidents ensued, but the cause was unknown, for the patient kept his secret; different remedies were administered, but there was no abatement of the sufferings.

The pins were so deeply pushed in that there even remained no signs of their introduction. The primitive symptoms disappeared, but the pain continued, and the palpitations were very severe. The ensuing year this wretched man put an end to his existence in another manner. On a post mortem examination, two long hair pins were discovered in the interior of the chest near the heart, irritating this organ, in the same manner as the fragment of the sternum to which we have already alluded.

The traumatic compression may sometimes be carried so far as to cause sudden death by suffocation. In such a case pressure on the heart prevents the circulation of the blood, and of course respiration is immediately stopped.

The following cases are related in illustration of the preceding observations:—

Case. A young man playing at nine pins fell on a stone, and died instantly; and at the post mortem examination was found a fracture of the sternum with intro-pressure of the inferior fragment, which weighed on the heart.—(Duvernay.)

Case. An immense stone fell on a labourer who was working in a quarry; his chest was crushed, and he died of compression of the heart.

2. *Contusion of the Heart.* It is much more difficult to ascertain the simple contusion of the heart, for its effects are nearly similar to the preceding lesion. When compression is carried to such an extent as to cause suffocation, it must necessarily contuse the organ on which it acts. Dupuytren said that the contusion of the heart produced lypothymy more or less dangerous, consecutive carditis, and palpitations more or less durable, and more or less difficult to cure.

It is almost unnecessary to add what should be the treatment of compression and traumatic contusion of the heart. To attack the cause if possible, and by weakening medicine, prevent too strong a phlogistic reaction is the best, and the only principle on which the practitioner can act.

It must be owned that the observations on contusion of the heart are not so satisfactory as might be wished.

3. *Displacement of the Heart.* "The permanent displacement of the heart through traumatic causes has hitherto

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scarcely been noticed. The following is however a remarkable example of this case:—

A young mechanic of one and twenty, was caught in the wheel of a machine, and horribly mutilated,—two of the lower ribs on the left side, and the fifth, sixth, and seventh on the right side—the humerus and the right clavicle were fractured. Excruciating pain and pulsations similar to those caused by a foreign agent, were felt on the right side. The heart had passed to the right of the sternum. At the end of a month, the patient was better, but his respiration was oppressed, and the pulsations were felt on the right side. The slightest emotions increased their violence. Cold suddenly striking the hands or the chest, brought the patient to a state of suffocation. His health was very bad during three years: vomiting came on after every repast, and the winter was generally marked by numerous pulmonary congestions, with increase of the other symptoms, and principally great pain in the right side.

Digitalis was prescribed in doses of ten grains every night, after which dyspnœa, and the palpitations were diminished; the pulse, which was at 120 and 130, fell to 80. The chest was deformed, the lower part was dilated more than an inch, the shoulder was depressed. The left side resounds on percussion; the sound is very clear between the fifth and seventh ribs: normal situation of the heart. The noise of its contractions or pulsations is not heard in all the left side; respiration feeble. The sound from the upper part of the right lung is clear. Under the fifth rib a great sensitiveness and pain, no respiratory noise, no bronchic sound. The heart is felt, in the right mammary region, between the sixth and seventh rib, an inch below the sternum. Its impulsion precedes, at stated intervals, the pulse of the radial artery.

After so precise an examination, the displacement of the heart could not be doubted. The normal situation of the heart had been ascertained before the accident happened. There are many well known cases of displacement of the heart, arising slowly from the development of a tumor, either solid or liquid, in the chest, but nothing of the kind has yet been published resulting from traumatic violence."

Opinions of a French Surgeon on the State of the Ophthalmic Hospitals of London, and of the Profession in this Country.*

Dr. Bourjot St. Hilaire has lately been in London. He writes of it like a gentleman and a man of science. Too many Continental physicians and surgeons have paid a flying visit to this metropolis, and knowing nothing of our language or our manners, have confidently pronounced opinions, too often ridiculously false, upon our practice. Such is not the case with Dr. Bourjot St. Hilaire. We will quote a passage.

"The hospitals (ophthalmic) are not so large in London as in Paris, and this is an advantage; for they are more dispersed, and more within the reach of a patient's friends—and, according to the lower class of people, they appear less like hospitals. The wards are lofty, well lighted, and do not hold more than fourteen beds; there is a wide space between them, and there are many little utensils which allow the sufferer to fancy himself *at home*. All the furniture is well painted, and therefore easily washed; the floors are of timber, and cleansed every morning—there are no offensive smells, so common in France, particularly at the *Hôtel Dieu*, and which is a powerful cause of insalubrity.

In each ward there is a fire-place and a good fire, so that there is always boiling-water to make the tea, which is brought to the patients by their friends; and this beverage serves as diaphoretic, stimulus, diuretic, aperient, for each and all cases.

In fine weather there are no bed curtains, excepting for the patients who have undergone operations; besides

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* Continental and British Med. Rev.

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which, at the foot of the bed, there is a screen. It would be very advisable to introduce this custom in our hospitals, particularly in the ophthalmic wards: as it protects the patients from currents of air far better than curtains."

M. Bourjot appears to have arrived at a pretty accurate estimate of the state of the profession in this country, and, we suppose, in all. He had, possibly, heard that the faculty in England were rolling in wealth, and abounding in honour. A very brief acquaintance with their physiognomy convinced him that they were neither one nor the other.

"Let it not be supposed that the practice of medicine in London, or in any part of England, has prompt and pleasing results for the young practitioner. The difficulties are the same in England as in France, in London as in Paris; the same jealousy, the same rivality—in fact this fine profession does not, either in England, France, or Italy, give the advantages that might rationally be expected from a great advance of money; an education prolonged to an advanced period of life, a continual exercise of the intelligence: and medicine, destined to play so great a part in society, is frequently the most laborious, and less lucrative profession."

These observations of Dr. St. Hilaire's corroborate some which we have made on the subject of medical education in a former part of this Journal. The profession, taking it en masse, is any thing but well off. A ruinous competition prevails in its ranks, and the majority of its members must look forward to a life of labour, with little prospect of accumulating such a competence as may maintain themselves in age, or support those dear to them whom they leave behind.

But it must not be supposed that there exists any occult cause for this unfortunate result. That is just what might be expected to flow from a system of medical policy which encourages rather than represses the influx into our ranks—a policy the effects of which will be felt more keenly every day—a policy which some insane radical reformers are clamorous to extend.

One has only to look on a knot of medical men collected on any occasion in a large city, to be satisfied that "the world is not with them," or at least with too many of them. The "shocking bad hat," the rusty black coat and breeches of the same description assiduously brushed, the muddy complexion and care-worn countenance, and the lean and hungry ensemble, tell, alas, in words that cannot be misconstrued, that toil and anxiety and disappointment are the lot of many a noble mind—and that men whose feelings and whose education have qualified them to fill a respectable station in society, are compelled by necessity to eke out a scanty livelihood, from the unwilling payments of insolent shopkeepers and artizans.

From the cry that has been got up against the "Pures," a person who knew nothing of the matter would suppose, that these were the depositaries of the wealth and the success of the profession. There never was more arrant stuff. The majority of the "Pures" are well known not to make "salt to their porridge." A man who should now go into practice as a "Pure" must either have very superior talents, a very strong introduction, or some private fortune. Ninety-nine out of the hundred of young "Pures" make nothing at all by their practice, if that term should be facetiously applied to what they do. If you wish to see a young Pure, you do not look at the carriages, "cabs," or tilburies that are passing, you do not dream of seeing him emerge from a door whose knocker is tied up, but you go to the board-room of a hospital, or to the operating theatre, or dissecting room. There they are in shoals, neatly dressed, gentlemanly, quiet young men, with a strong expression of expectation in the countenance, and a consciousness of merit not yet drawn out. They chat, stroll round the wards, and warm their nether ends at the board-room fire until two or three o'clock, when one of them suddenly recollecting a very urgent appointment, the others as suddenly remember the same thing, and all hurry, they alone know where.

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The few "Pures" who do succeed, enjoy, no doubt, what prizes the profession of medicine has to offer. But they *are* a few, and, as at the Bar, there are more called than chosen. If a young man commences as a general practitioner, industry and good conduct will pretty certainly obtain him a subsistence. But a "Pure" is certain of no such thing, and many an one, after waiting for some tedious years, with scarce a fee per annum, has retired in disgust from the profession, and preferred the scanty stipend of a curate, or the precarious chances of the law. Too many instances of this sort have occurred amongst our own contemporaries.

Norfolk and Norwich Hospital.

Report of Surgical Patients admitted in the Year 1834. By J. Goodwin Johnson, Esq. Assistant Surgeon.

This Report is contained in the last volume of the Provincial Society's Transactions. It is short, and so must be our notice of it.

It appears that this hospital contains upwards of a hundred beds, and is officered by three physicians, three surgeons, an assistant-surgeon, and a resident apothecary.

The number of patients admitted between the 1st of January and the 31st of December 1834, amounted to 658. Of these the in-patients were 469—the out-patients 189—and the casualties amounted to 247, being more than a third of the whole number. The deaths during the year were 20, the number among the males being 17, that among the females 3.

The causes of death were as follows:—Two from *burns*, viz. a child under 10, and a woman of 80;—three from *stone*, viz. 1, a man who came in with a stone of large size, and inflamed bladder; he died in a few days: 2, a man aged 63, having had symptoms for four years, was lithotrized, and died of inflamed bladder, &c.—3, a child 3 years old, having had symptoms for one year, was cut, and died in a few days;—two from *fracture of the skull*;—one from psoas abscess;—one from general cachexia:—one after amputation, on account of a diseased knee-joint;—one from cut-throat;—one from fracture of the spine;—one from malignant disease of the testis;—one from gangrene of the foot;—one from sloughing of the urethra;—one from disease of the lungs, supervening on psoriasis;—one from compound fracture of the arm and thigh;—one from a catheter, broken in the bladder;—one from disease of the lungs, supervening on fracture of the arm;—one from a cause not stated.

Of the 658 patients admitted, there were—

Cured	448
Relieved	53
Died	20
Went away without leave	14
Discharged at their own request	14
Not likely to receive benefit	8
No account given	51
Remain under treatment	50
	658

Of the 51 of whom no account is given, a very large proportion consisted of trivial cases, which were evidently cured, but did not attend to be discharged.

The greatest number of patients admitted were between the ages of 10 and 30. Nearly a half of the whole number, 293, were between those ages.

We may now mention some circumstances and cases, which deserve a special notice.

1. Several of the cases of posterior curvature of the spine were successfully treated, by rest on a firm mattress, the adaptation of a wooden splint, well padded, to the projecting vertebræ, and stretching, which was effected by fixing the head to the upper end of the bedstead, and making careful and graduated extension of the hips and legs.

2. A vesico-vaginal fistula, arising from a long and protracted labour, was not benefited by caustics, cautery, or ligatures.

3. Ten male patients were admitted with calculi: six were cut, of whom one died, and five were cured: two re-

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fused to remain in the house; one was a man of seventy, with a very large stone, having had symptoms for ten years, and was not considered a proper subject for the operation; and one died shortly after his admission, from inflamed bladder and diseased kidney.

4. A portion, more than five inches long, of a catheter, made of soft metal, somewhat firmer than a metallic bougie, was broken off in the urethra and escaped into the bladder of an old man of 80; it was seized by Weiss's forceps and extracted. He died six days afterwards, being sixteen from the accident.

Examinatio cadaveris.—The intestines were firmly bound to the bladder by adhesions of long standing; the coats of the bladder were considerably thickened, and its cavity much contracted; the mucous membrane was vascular and dark; the right lobe of the prostate gland was enlarged, and the left much more so; the third lobe, which formed a projection into the cavity of the bladder, was soft, spongy, and vascular, and had been perforated by some instrument. The neck of the bladder was found uninjured by the operation, but the lining membrane of the urethra was lacerated in several places. The urine in the bladder was mixed with muco-purulent matter.

5. *Cases of fracture of the skull.*—These are interesting.

CASE 1. *Compound Fracture of the Skull—Bad consequences from removing a Foreign Body.*

James Becket, aged 16, admitted in the afternoon of January the 12th. He came from a distance of four or five miles in a cart, and got out and walked into the hospital without assistance. On examination, the breech-pin of a gun, which had burst in firing, was found to have penetrated the frontal bone, just in the situation of the superior longitudinal sinus. He gave an account of his accident, answered questions well, and was not at all confused. The surgeon who had charge of him, proceeded to remove the breech-pin, which was firmly impacted, and afterwards took away three or four portions of bone, one of which contained part of the ridge to which the superior longitudinal sinus is attached. The aperture in the cranium was now nearly an ich in diameter. The dura mater was wounded, and a portion of cerebrum escaped on the removal of the foreign body. The wound was lightly dressed. *Very soon* afterwards he became restless and uneasy; complained of pain, and was much confused. Pulse 50, and intermitting; his pupils rather dilated. Half an hour after the operation he became comatose, and his breathing stertorous; and he had slight convulsive twitchings of his *left arm*.—Ten o'clock p. m. Pulse rapid and small; pupils of natural size; passes his urine involuntarily; breathes heavily; the dressings were thrust up by a protrusion at the wound.

13th, morning.—Had been insensible all night; his left arm moving convulsively; the right side of his body paralytic; pulse 150; pupils of natural size, but inactive; respiration hurried; unable to swallow.—Evening. The left side is now become paralytic; tumour of brain more prominent.—14th. Died at ten this morning, without convulsions.

Examinatio cadaveris, Jan. 14th.—The tumour protruding through the aperture in the cranium, seemed to be composed of dense layers of coagulated blood and cerebral substance, of a dark colour, sloughing and disorganizing; and the brain in immediate contiguity with the hernia, presented a somewhat similar appearance. The tumour arose from the right anterior lobe of the cerebrum, near the superior longitudinal sinus, which had been wounded on the side next the hernia, and a large quantity of coagulated blood was found both above and beneath the dura mater in this situation. The brain, in general, was pale and bloodless.

The surgeon who had the charge of the patient, communicates his opinion on the case, in the shape of the following note.

"This boy walked to his ward on arriving at the hospital; was quite sensible, and continued so, without any

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symptoms of compression, *until after the breech-pin was removed,* when he became, in a short time, comatose with stertorous breathing and dilated pupils, and died in less than forty-eight hours. Death, in this case, ensued from pressure being removed: the brain being left not only *uncompressed,* but unsupported, at the seat of injury, so that some of it escaped through the wound, and a hernia cerebri was quickly formed from the impetus of the circulation. Thus death was expedited by the injured brain protruding so as to interrupt, more completely, its functions. Had I allowed the breech-pin to remain, life would, I believe, have been prolonged, and have terminated, in the course of some days, from inflammation of the membranes of the brain. How are we to reconcile this case with the present doctrines of our greatest authorities, in regard to compression of the brain? The symptoms which quickly shewed themselves on the removal of pressure, in the above case, were precisely those enumerated as the *symptoms of compression.* We can only say, that such a train of *symptoms* are the effect of interruption to the cerebral functions, and that compression is *one,* but *not the only cause* capable of producing these symptoms."

We must confess that this hypothetical explanation of the case is far from satisfactory. The following objections to it readily present themselves.

a. In cases where the brain is wounded, and portions of it escape, or protrude in the form of hernia cerebri, such symptoms as occurred in this instance are not common. On the contrary, in cases of hernia cerebri, symptoms of compression have repeatedly been induced by the actual application of pressure to the fungus.

b. The superior longitudinal sinus was wounded, coagulated blood was mixed in layers with the cerebral substance, and a large quantity of coagulum was found both above and beneath the dura mater. Here was an abundant source of compression, and this, with the disorganized condition of the cerebrum, is sufficient to explain the symptoms in a satisfactory way.

So far as this case goes, it supports the propriety of the recommendation given by many of the best practical surgeons, not to meddle, if possible, with foreign bodies impacted in the brain. But the treatment of these cases is uncertain, after all, and it is difficult to determine what is really the best practice. Perhaps, in this as in other instances, it is well to adopt the cautious maxim, of not doing any thing, when what we do *may* be injurious.

Case 2. *Fracture of the basis—consecutive effusion of blood.*

Martha Ward, aged 68, admitted at 10 P. M. on the 18th of September. She had fallen down three or four stairs at twelve o'clock at noon; was not aware how long she remained prostrate, but had got up without assistance; she was quite sensible, and had described her fall to a medical student, who visited her soon after, and who thought her case trivial. At three o'clock she became comatose, and her breathing was stertorous; and she remained in this state until six o'clock, when a surgeon saw her, and bled her to twenty ounces. On admission, she was insensible, and her breathing stertorous; her pulse small and frequent; her skin pallid and cold; there was loss of power in the left eye-lid, the pupil of that eye being contracted and fixed, whilst that of the right eye was dilated and sluggish. She was continually carrying her right hand to her face, but scarcely moved her left arm; she moved both her legs when tickled on the soles of the feet, but the left less actively than the right; her urine and fæces passed involuntarily; there was a very small wound behind the right ear, which, however, did not communicate with the bone: no fracture was felt. She became gradually worse, and died at seven o'clock in the morning of the 20th.

Examinatio cadaveris, Sept. 20th, at half-past eleven.—There was a fracture of the right parietal bone near the posterior inferior angle, a portion of bone, an inch long by half an inch wide, being insulated and loose, but not depressed.

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A fissure extended from this spot, *upwards*, along the lambdoidal suture for an inch and a half; and to the same extent across the parietal bone and *downwards*, dividing the petrous portion of the temporal bone, and the mastoid process, and proceeding through the tympanum and eustachian tube, to the fissura lacera, at the base. On removing the calvarium, a large coagulum, weighing three ounces, was found between the dura mater and cranium; it was one inch and a half thick, and produced a corresponding indentation of the brain. The blood proceeded from a branch of the arteria meningea media, about two inches from the external wound; the brain and plexus choroides were pale; there was about half an ounce of fluid in the ventricles.

No doubt the symptoms were those of concussion in the first instance. The coma, stertor, paralysis which followed, resulted from the extravasated blood. That would seem to have begun to flow in any quantity, about three hours after the occurrence of the accident.

CASE 3.—*Compound Fracture and Depression of the Skull—no "Symptoms"—Operation—Recovery.*

It is in accordance with the present canons of surgery to operate in such a case as this. There is reason to believe that the operation is advisable in cases of compound fracture and depression, unattended with symptoms, while it is not to be recommended, in cases of simple fracture and depression without symptoms. This distinction was first insisted on by Sir Astley Cooper. The present case, so far as it goes, bears out the precept.

James Pye, aged 11, admitted December the 15th; there was a wound, almost parallel with the sagittal suture, over the left parietal bone, which was bare, and a triangular portion of it depressed, the depression being about twice the thickness of the cranium, and gradually diminishing. He was quite sensible, and answered questions readily and correctly; pupils active; pulse regular. The wound was enlarged, and a portion of the parietal bone, overlapping the edge of the depressed bone, was removed by Hey's saw. The depressed bone was then removed, the outer table being broken into three pieces, whilst the inner table remained whole. About six ounces of blood were lost during the operation. On the 18th, the pulse was quick, and he answered rather incoherently; but, after that, there were no further bad symptoms.

SKETCH OF THE HOSPITALS OF THE BRITISH AUXILIARY LEGION IN SPAIN.

For this we are indebted to a young naval surgeon of much ability, who occasionally visited the hospitals of the Legion, and had opportunities of observing the manner in which they are conducted. He does justice to the exertions of the medical officers, who deserve great credit for what they have effected, in spite of difficulties of every description. Amongst those officers, we may signalize Mr. Alcock, whose experience, gained at the siege of Oporto, and in many bloody fights in Portugal, has been happily applied to the mitigation of the sufferings of his brave comrades in Spain.

"There is a painful interest attached to all the circumstances connected with the present contest in Spain; to none perhaps more so than to those of the unfortunate British Auxiliary Legion, and its very able, zealous, and laborious medical staff. From their first landing in that distracted and apparently doomed country, the medical officers of the Legion, but especially those on the Staff, have had their hands fully employed, in a variety of practice such as can rarely, if ever, fall to the lot of men engaged in more private life. The resources of those gentlemen have been taxed to the uttermost; their health and strength have in too many instances given way under a combination of adverse circumstances. Death destroyed many, and many more have been compelled to retire with the bankrupt estate of a broken constitution—an empty purse—and the already *dishonored* bills of the Spanish paymaster-general. A

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band of determined men remain to abide the issue of the war—and continue their assistance to ameliorate its horrors. It is to be hoped that some of them will hereafter furnish their professional brethren in this country with a medical history of the British Auxiliary Legion—such a work, drawn up with care and with a moderate degree of talent, would supply one of the most conclusive arguments against such wild and futile enterprises as that in which they have been engaged. The disastrous consequences of their sojourn in Vittoria—the ravages of typhus there, at Bilboa, at Santander, and at San Sebastian—the cart-loads of killed and wounded brought in, from time to time, to the military hospitals—and the deplorable state to which hundreds are already reduced—would furnish abundant materials for such a work. The multitude of interesting facts afforded by nearly two years military practice at the seat of war itself, might render it of incalculable value to the military branches of the profession. And the melancholy exhibition it would make of the ignorance, vanity, conceit, and dogged obstinacy of the Spanish and other executives in resisting the humane efforts of their medical attachés to give efficiency to their department, might teach a salutary lesson to those who will only learn lessons of humanity, or even common-sense, when taught them in the hearing of that public on whose breath they feed and live.

The writer of these observations was in no wise connected with the Legion. It was not his lot to serve in that body—and to any credit that is due to the medical branches of it, he has no claim. It is, and ever will be, matter of regret to him, that the very harassing nature of his own employment left him few opportunities of improving his acquaintance with the labours of his professional brethren in that, in many respects, unfortunate corps.

But the want of ability and energy which appears to characterize the executive department of the Legion, is not visible in the medical, or, as it is contemptuously designated, the Civil department. And the provision made for the comfortable reception and treatment of the sick and wounded soldiers is creditable to all concerned. At Santander and San Sebastian, between which places the different regiments are divided, very respectable hospitals have grown up for the reception of casualties, &c. and the general order, cleanliness, and attention paid to the patients, might be transferred with advantage to some of our more costly establishments nearer home.

There is but one hospital at Santander, pleasantly and healthily situated on an eminence, overlooking the town and harbour. The interior is far cleaner than the exterior, a somewhat strange anomaly in either public or private buildings in a Spanish town. The beds well supplied with bedding—and arranged at convenient distances in three parallels. The attendance good. And the patients quiet, orderly, and cheerful, for the most part, notwithstanding their sufferings. Most of the cases there were convalescent, at the time of the writer's visit—and none of particular interest. A very virulent form of itch was prevalent among some of the inmates, who were separated from their companions in consequence, and, half naked, set to rub one another from head to foot with the ung. sulph. comp.—They were deplorable objects—and I never before saw the disease assume so fearful a type.

At San Sebastian there are two hospitals (English), San Telmo and La Lonja. The former is appropriated to the reception of surgical cases principally—the latter was chiefly filled with cases of fever. Typhus, happily, milder than usual, was, at the time of inspecting it (November 1836), prevailing in the town, and La Lonja was accordingly excessively crowded. Most of the patients lay two in a bed, many of them had not so much as a shirt to cover them. The effluvia were intolerable, and, it must be confessed, that the contrast between it and San Telmo was very broad, and by no means favorable to the mode of conducting it.

San Telmo occupies an extensive site under the castle hill, and on the eastern shore of the isthmus connecting that

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promontory with the main land. Formerly a monastery, one may be sure the "holy fathers," who chose it for their residence, paid especial attention to all the advantages of sight and sense, before deciding to domiciliate there.—As a surgical hospital it may be said to have grown out of the action of the 5th of May, when the edifice was desecrated to the purposes of a Spanish barrack. The wounded, after that action, were obliged to be distributed in different buildings, from the want of a suitable edifice for their general reception—and the inconvenience and excessive labour resulting from such a state of things led to the ejection of the sound and healthy soldiery from this convent, and its subsequent conversion into a hospital for the wounded.

It has extensive accommodations—is well attended—and evidently the subject of admirable and consistent discipline. There are, besides offices, storehouses, and a tolerably well-stocked dispensary, five long, lofty, and airy wards, each of which is said to be a "division," and has been taken advantage of for the better classification of patients according to their respective cases.

The *first* division contained only *slight* cases, in which general designation are included diseases of the eye and eyelids, flesh wounds and their sequelæ, &c. &c.

The *second*, cases of compound fractures of the extremities and amputations.

In this ward, there was one curious, but, alas! by no means uncommon case, of spontaneous amputation of both legs. The wretched object was one of the sufferers from fever at Vittoria, and one of the consequences of that fever, and of the cold and wet to which he and his companions were inhumanly, and, in a great degree, unnecessarily exposed, by the Spanish jealousy of Cordova, was, mortification of both feet, a little above the ankles—the feet literally dropping off, and the vis medicatrix naturæ supplying their place with very fair stumps, without the aid of surgeon or surgical instrument.

It would be unjust to those who have had the anxiety and labour of treating the cases in this ward, and from whom it is expected that some valuable practical observations are forthcoming, were the writer to cite particular cases of interest here. The number of compound fractures of the extremities has been very great, and the treatment generally very successful. In cases of fracture within the capsular ligament of the femur, several attempts, however, have been made to save the limb, but always, I believe, at the cost, ultimately, of the life. The possibility of re-union of the broken bone within the capsule, is still however insisted upon, and apparently somewhat countenanced by the result in one femur which was shewn me, and the history of which, it is thought, will be published by Mr. Alcock—but, in that example, the re-united portion of bone had not been fractured within, but at the insertion of, the ligament. And the practice is surely perilous in the extreme to the patient, protracting, of necessity, his sufferings to so great a length, as to leave him, at last, little chance of deriving benefit even from an operation. While the advantage to be gained in the preservation of a limb, however desirable, cannot for a moment be weighed in the balance against the fearful loss of life, which has hitherto attended such attempts to restore the soldier to the service without mutilation. The knife is the dernier resort certainly of the surgeon whose head and heart are alike accomplished for the successful exercise of his profession, one with knowledge and judgment, and the other with sensibility and kindness. It is as certainly the first appeal of the inexperienced and unfeeling, because ignorant, novice in surgery. But, when resorted to, as in the cases referred to, we contend it ought to be, it should be with promptitude and without fear.

I may here also take occasion to observe, that the various divisional surgeons at San Telmo, have, in their amputations, adopted very different practices. One continues the old circular, and, we may say, circuitous method—another, treading in the steps of his master, Mr. Liston, has introduced the flap operation. A third has attempted to improve it by an operation, half-circular half-flap, preferable to the

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common circular one in the subsequent appearance of the stump, inferior to that of the flap by prolonging the operation, and consequently the punishment of the patient.

The *third* division or ward is given up to cases of complicated flesh-wounds;—wounds penetrating the joints and great cavities, or accompanied with lesions of arteries and nerves;—and, compound fractures of the head and chest. The cases here, as will readily be conceived, were of great interest, and some of them exceedingly curious. The great advantage of constant medical superintendance, was apparent in the recovery of some, at first hopeless, cases of gunshot wounds penetrating the lungs and fracturing the ribs. Indeed it is impossible that any thing can exceed the attentions paid by the divisional surgeons to their respective wards—and to the comfort and well-being of the men entrusted to their care. The happy results will be manifest should the proportional tables which are kept, be hereafter published.

The FOURTH and FIFTH divisions are reserved wards, used chiefly for convalescents.

And, a further subdivision of cases is obtained by arranging corresponding cases in sets.

Each division has one staff surgeon, and two assistants. The average number of patients in each ward, for whom professional attendance is thus provided, is about 90, or 450 in the whole hospital, which, however, has, upon occasions, contained upwards of 500 cases at one time.

Under the medical officers of each division, the following servants are employed; 1 female nurse, 1 ward master, an assistant ward-master, who acts as clerk of the division, and ten orderlies, these last, being more or less, disabled men.

The orderlies are selected principally from "the hospital corps," which was formed of men who had been previously declared unfit for regimental duty by a board, composed of three staff-surgeons, with, now and then, the inspector, or Deputy-Inspector-General, and consists of 100 men for service in the interior of the hospitals, at an average of one orderly to eight patients. They are paid by the Deputy Purveyor 1*s.* 1*d.* per diem, and commanded by a Lieutenant.

Besides this corps, there is another, called the "Hospital Transport Corps," commanded like the former, by Lieut. Smith, B.A.L.; but, unlike the former, composed of able-bodied men, from 30 to 40 originally, since increased to 50, and mostly tradesmen. This corps was formed in England—is employed on fatigue duty, and in repairing defects about the building, &c. They are paid like the wagon-train, 1*s.* 10*d.* per diem, and supply the wardsmen.

The Staff-Assistant Surgeons perform the duties of "Orderly Medical Officer" in rotation, when they remain throughout the day, and also sleep in the hospital in readiness to receive casualties, and prescribe for cases of emergency. An admirable plan, which might, with some modification, be adopted in our metropolitan hospitals—and is, or, at least was, acted upon, at the London Hospital. The advantage to the students in such case, being obvious, interesting them in particular cases—and accustoming them to act subject to the correction of others, before sending them forth to act altogether upon their own responsibility.

Attached to each Division is an Orderly Room, where the various reports are made up—and in which the respective duties of every servant in the establishment are accurately defined, and explicitly stated.

The beds were ranged in three parallels along each ward, somewhat crowded, of necessity—but all, as cleanly as could be expected.

On the arrival of every new patient, his clothes, &c. are exchanged for a complete suit of hospital clothing, and, together with his arms and accoutrements, deposited in a store, which, for neatness and order may vie with any thing of the kind in England. It is a part of the ward-master's duty before taking down a patient's clothing, to stitch the name of the owner to each article, with their joint initials attached, an excellent and necessary precaution against suspicion of robbery or fraudulent exchange, when restored.

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The patients are discharged twice a week, at which times the surgeons of divisions present to the deputy inspector-general a list of such as they deem meet to be sent out, and he further examines such men, and either confirms the previous opinion, or remands them for ulterior treatment.

The foregoing notice has been confined to the hospitals belonging to the British Auxiliary Legion, and is almost a literal transcript of notes made on the spot at different visits paid by the writer, on his occasional arrivals at San Sebastian in one of his Majesty's vessels of war. That it is so meagre he regrets exceedingly—but the condition of a naval medical officer, particularly if alone, is of all conditions the most precarious, he can neither calculate upon time or tide, wind or weather—and such facts as he can collect, he must gather as he can, not as he would, happy, if allowed to gather any beyond the precincts of a midshipman's berth if an assistant surgeon—or, of a gun-room, if a surgeon.

And this remark suggests to the writer a mode of accounting for, what, to himself, appeared strange, and to others was *felt* as ungracious, not to say ungenerous, in his professional brethren employed on the North Coast of Spain. Only one or two had ever visited the Hospital of San Telmo. Even the second surgeon of marines, living as he did at San Sebastian, had never "honoured" the interior of that building with his presence—and thus let slip an opportunity for which others would have gladly paid any price. Why this apparent apathy—why this "tipping the cold shoulder" to members of the same profession—arduously, and, truly, honourably engaged, in the peaceful and laborious exercise of that profession? It may seem abundantly absurd, but it is nevertheless unquestionably true that the distinction of caste holds elsewhere than in India. The Officers of his Britannic Majesty's Navy deem it derogatory in them to associate generally with the Officers of her Catholic Majesty's British Auxiliary Legion—and it is feared that the medical corps of that navy participate in such narrowness of feeling. But this is not the case. The Hospital at San Telmo would, doubtless, have been more generally, and frequently visited by the medical men of the squadron—had their stay not been so uncertain as it invariably is, in harbour—and were the difficulties to civilians going to and fro out of their ships less than they are rendered by those in command.

It may now be added that, there being several hundred royal marines employed at Passages, a port distant three miles from San Sebastian—and a good number of royal marines, royal artillerymen, and engineers, engaged strengthening the lines between those places—there are also two surgeons R.N. attached to them—who reside on shore, the senior, Mr. Dabbs, at Passages, where he has a very well regulated hospital. His whole time is nearly occupied in personal attendance upon the arduous and excessive duties of an hospital, for the sick and hurt of upwards of 800 men—without even an assistant being allowed him, while his colleague at San Sebastian, has, comparatively, nothing to employ him, and, being of equal rank, cannot, and ought not, consistently with official etiquette, to be employed as an assistant. Here, at Passages, the diseases have been chiefly visceral—and epidemic—partly the effect of climate—partly of the local situation of the town—and partly also of the incessant occupation of the men on the summit of a hill, which bares its head to every Northern blast—and on which, for many months, there was nothing worthy the name of shelter either from wind or rain.

The Spanish Hospitals have not been noticed—but little sympathy appears to exist between the Spanish and English faculties—and little correspondence, as a matter of course, takes place between them. What was, in peaceable times, the Esculas Publicas, or Public School, is now an hospital for Spanish sick and hurt.—I visited it, but could find no medical guide through the wards, which were clean and quiet—and was obliged to content myself with the exchange of civilities, and with pouring a word of comfort and encouragement here and there upon the auditory nerves of our Spanish neighbours."

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MISCELLANIES.

Medical Attendance on the Sick Poor.

I. Observations on the Arrangements connected with the Relief of the Sick Poor; in a Letter to the Right Honourable the Lord John Russell, &c. &c. By J. Yelloly, M.D. &c. &c. 8vo, Stitched, pp. 43. Longman's, 1837.

II. Observations on the Present Condition of Medical Relief for the Sick Paupers; with Recommendations for an Altered and Improved System.

In a former Number of this Journal,* we took up the subject of the medical section of the New Poor Law, and recommended our professional brethren to bestir themselves, and by urgent and judicious appeals to the legislature to procure better treatment at its hands. Our feelings on this subject have certainly not diminished, but acquired force from reflection and time. The mass of practitioners are deeply sensible both of the injury and the insult heaped upon them, and, throughout the country, they are protesting against the arbitrary, we may say the insolent conduct of the Poor Law Commissioners.

The Weekly Medical Journals are incessantly occupied with the discussion of the Poor Law, and with loud denunciations of its authors and its principles. Not confining themselves to the regulations affecting the profession, they step out of their sphere, we think most injudiciously, and mix themselves up with opposition to the principle of the Poor Law Bill.

The pamphlet before us, from the pen of Dr. Yelloly, applies itself to the subject of medical relief to the sick poor, and carefully avoids the general question. Dr. Yelloly himself, appears in an amiable light, for his interests are not and cannot be involved, and zeal only for the wider interests of his brethren can tempt him to the arena of political dispute.

From this pamphlet we shall make some extracts, descriptive of the evils, and suggesting the remedy, of the existing system: and we shall add the propositions which have emanated from some of the most indefatigable reformers of its abuses.

Applicability of the Principle of Competition?

If a man wishes a building erected, he puts the thing up to competition, and decides by tender. But he does not necessarily take the lowest tender, indeed the lowest tender is notoriously usually rejected. A very low tender implies fraud, and the suspicion of that occasions the rejection. But whatever tender is accepted, a guarantee is obtained for the bonâ fide fulfilment of the stipulations, for an architect or surveyor is appointed to see them properly executed.

This principle of competition, this mode of purchasing cart loads of pork or of brick and mortar has been liberally applied to the acquisition of medical attendance on the poor. The Commissioners have demanded tenders, have selected low ones, and have entrusted the sick pauper to the contractor they have chosen. But where is the guarantee for the performance of the contract? Where is the professional surveyor who shall pronounce that due medical attention, proper drugs, or skilful service have been given? The Commissioners have no such surveyor in their scheme. To compensate for that, they have a method of their own. A relieving officer, no medical man, and a Board of Guardians, not medical neither, decide both the necessity for medical attendance, and its propriety when given. An admirable and a humane provision, distinguished alike for its sagacity and feeling. A provision which, in point of common sense, is about on a par with putting a butterman, to decide on the execution of the contract of a bricklayer.

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"No one," observes Dr. Yelloly, "would, I am sure, make competition and low charges, ingredients in his choice of a solicitor, who is to be entrusted with the management of his most important private affairs; or of an engineer, who is to devise or to carry into effect momentous operations, whether of a public or private nature; or of the fabricator of that nice and curious machinery, which, in the trackless ocean, enables man to pursue his way with confidence and accuracy; but his aim would be, by a judicious selection in the first place, and liberal treatment in the next, to ensure the full exercise of the most faithful, and most able services.

In all these cases (and it is hardly necessary to multiply them, or to deduce examples from government, war, or diplomacy) it is not a common operation which is required, or an article of obvious character which is to be provided; but it is the intellect, the spark of divine essence which we wish to enlist in our service; the exercise of unfettered zeal, assiduity, and talent, which would be chilled and repressed by any thing like illiberality and suspicion."

"And yet with regard to the parish surgeon, he is required either to accept a sum which the least consideration or inquiry will evince to be totally inadequate; or he is desired to give in his proposals, which he knows must be within certain prescribed limits; or he is threatened with a competition, by the introduction of some new practitioner into his district, which must in some degree risk a still further reduction of his hardly earned income, than the crowded state of the profession has yet occasioned. There is no disposition to reward according to services, but the ungenerous feeling is too generally entertained, to employ the very hardships under which the profession labours by the numbers who enter it, as a means of still further depression. I have remarked that the parsimony is inconsistent, and that it applies to an article of comparatively small amount; and I will add, that if medical attendance were even adequately remunerated, it would still form but a small item of general parochial expenditure."

Would these "tender" Commissioners adopt this plan, were their own well-lined paunches the seat of colic or of flatulence? Not they. No "cheap and nasty" surgeons or physic would enter either their doors or stomachs, but disregarding the principle of competition and of tender, they would consult whom they thought the ablest, not the neediest man. The same thing would be done, and is done constantly, throughout society. It is not *mere* cheapness that the anxious mother, husband, or child consults in procuring medical assistance for the objects nearest and dearest to their hearts. The pauper, however, is treated otherwise. He must have medical relief. That is a bore. Let him have the worst.

It would be absurd to demand on the part of the Commissioners any sympathy with the profession itself. They cannot be expected to feel any regard for its interests or its respectability. When they are told then, that to be a parish surgeon is now almost discreditable; when they learn that taking office is a bitter pill, swallowed only through dread of a worse, they naturally reply, "What is that to us?" They are in their seats for the purpose of economy; their great aim is to lower the rates. If a pauper or two die from tardy or from incompetent medical assistance, or if a liberal profession is bullied and degraded, those are small matters in comparison with the solid savings on the poor's books. Yet it must be owned that the profession *is* degraded, and that the appointment of a parish surgeon has lost, not gained, in respectability. Dr. Yelloly shall again speak, and from personal experience.

"I may add, that the inadequate terms of remuneration, give a low rank to parish employment, and prevent the more established and best estimated practitioners of a district, from wishing to have any share in it.

Of this circumstance I know personally several examples; and cannot help feeling it to be a subject of great regret, that any want of liberality in medical arrangements, should be the means of depriving the poor of the best advice which their locality can afford them."

"In Norwich, they have had con-

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tinual changes. At first they had the attendance of physicians; but no one of that class will now accept office under this system; and they are entirely dependent on the younger class of practitioners, who may be expected to throw up their appointments after a certain time; and this when the addition of one hundreth part (£200) to the annual expenditure, calculating it at an average of £20,000. per annum, would render the attendance on the poor very satisfactory."

"In my own neighbourhood, in the small town of Beccles and Bungay, the principal practitioners do not take parochial employment; and this is likewise the case at Norwich."

Whatever the Commissioners may say or think, their employers, the Government, will find, that to goad an entire profession into open hostility against a law, itself not popular, is any thing but politic—and that the attempt at once to insult, and by the operation of terror, to silence that profession, will most assuredly fail. Either the terms offered it are just or not. If they were just, the feeling that exists could never have been raised—and if they are unjust, neither authority nor cajolery can stifle it.

The profession loudly complains that it is snubbed by every Board of Guardians, nay, by the very relieving officer—that Government encourages a ruinous and derogatory competition—and that the attempt to procure fair and reasonable terms is put down, by the threat of procuring young adventurers, the—

Heaven's Swiss, who fight for any God or man—

to bully the respectable practitioners.

It is too much for our patience when the Commissioners reply—that they entertain no intention of insulting the profession—that medical men are the best judges of what they can or cannot afford, and that acceptance of terms must be construed as approval of them—and that the *honour* of the office of a parish surgeon satisfactorily accounts for the readiness to take it at a loss. The fallacy of these arguments, and the solemn sarcasm they carry, would be ridiculous, if the subject were not too serious for a joke.

But what is to be done?

Dr. Yelloly proposes:—

1. That the parish surgeon should be elevated, not degraded—his utility enhanced by self-respect, not diminished by contumely and wrong. Such an argument is probably unintelligible to the Commissioners.

"With regard to the mode in which a change in the medical arrangements could be effected, it would not be difficult to assimilate the system of providing medicines for parishes, in some degree with the method pursued in furnishing them for the army and navy, or for hospitals and dispensaries. It would be important to banish entirely the present plan of making it the interest of a professional man to withhold the medical aid that is proper; and this it appears to me, may be readily effected, either by providing parishes or unions, with a certain supply of medicines, and awarding a remuneration for attendance separately; or if it be determined that one sum shall still cover the whole, by making a proper estimate of the value of the medicines necessary, and superadding a fair remuneration for attendance and trouble.

Such an arrangement would be most readily effected with the sanction of Government, through the means of the Poor Law Commissioners. But it is a matter of grave and important consideration, whether it would not be in proper conformity with other parts of our social system, that there should be a medical gentleman of character and experience, connected with the Poor Law Commission, and possessing the confidence of the public and the profession, to study and advise on the many subjects of a professional nature which must continually come before that Board. While parishes acted separately, such a plan was impracticable; but now that the management of the poor is concentered in one body, I do not think the medical department can be efficiently, or satisfactorily regulated, without such aid. The Commander-in-Chief of the Army, or the Lords of the Admiralty, would never think of trusting solely to their own knowledge of medical affairs, for managing concerns which relate to the health of our soldiers and sailors. They depute this duty to

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adequate and efficient men, who, while they leave the whole power of the general regulating body untouched, are the confidential advisers of the heads of departments, and are a guarantee to the public and the profession, for their having every species of professional information placed before them to direct their decisions."

We leave Dr. Yelloly, and turn to a letter published by the Messrs. Rumsey, and Mr. Robert Ceely. It breathes a tone of indignant remonstrance—that is natural; points out the evils of the present system, and the abused powers of the Commissioners—that is now unnecessary; and proposes remedies, which we shall quote.

1. "So long as the present unlimited powers of appointing and dismissing—of summoning and judging—of justifying and condemning medical practitioners, continue to be vested in parties necessarily so incompetent, (even although a fairer remuneration for the duties performed were conceded) the medical department of the Poor-law must continue a fruitful source of degradation to the profession—of contention and complaint in every locality—and of suspicion and dissatisfaction, not only towards the Poor-law administration, but towards the government of the country.

It has long been found expedient that medical men employed in the public service should be placed under medical supervision. For this reason, and to remedy the serious evils just noticed, as well as to introduce some uniformity and regularity into the medical arrangements for the sick poor, we recommend that the general superintendence and control of the medical department of the Poor-law administration be entrusted to a medical board, similar to the army and navy medical boards, and composed of persons practically acquainted with medico-parochial duties."

2. "We propose either that the legislature, as a supreme impartial authority, should fix the rate of remuneration; or that this be entrusted to a Board, to whom both parties might confidently look for justice.

If the latter alternative were adopted, and if it were agreed that the Medical Board, already recommended for other purposes, should also exercise this important function, it would be reasonably expected by the medical profession, one member at least of this Board should be appointed by, and responsible to the profession."

3. "At present, weekly medical returns are required to be made to the Board of Guardians, with specifications, not merely as to the names, ages, date of illness, and general state of the pauper patients, which is an unobjectionable regulation, but also as to the nature and designation of the illness, the frequency of medical visits, and even the treatment of the disorder, which latter three particulars must be, for the most part unintelligible to the parties by whom they are required, and are felt, on this ground, to be inquisitorial by the medical attendants.

While, therefore, the first four particulars continue to be reported to the Boards of Guardians, it is highly important that complete reports of cases under treatment be made to the proposed Medical Board. Such reports would afford evidence of the nature and amount of duty, and the efficiency of its performance; they would also constitute a check against abuses of every description; and if periodically completed and published by the Medical Board, would prove valuable to science, and useful to the public."

4. "Under the present system it is a common practice to entrust the care of extensive districts of parishes, and sometimes of entire unions, to individual medical officers. By this arrangement, so detrimental to the sick poor, and so injurious to established practitioners, the Poor-law authorities are enabled to offer "wider fields" for competition, and thus to attract a greater number of unemployed adventurers, and to reduce still further the rate of remuneration. But however destructive to the interests of the present race of practitioners, and to the safety of sick paupers, such temporary expedients may prove, it is obvious that, ultimately, there can be no other reasonable method of supplying medical aid to the paupers, but by means of the

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nearest medical residents—men whose ordinary range of practice includes the parish for which a medical officer is required.

We therefore consider it essential that the present arbitrary distribution of the parishes into medical districts be abolished, so that the medical officer be appointed for each district separately.

No surgeon should be permitted to undertake more than a certain amount of parochial duty, nor to act unless possessing certain qualifications as to length of practice, &c. &c.; both which should be regulated by the Medical Board.

If any surgeon, not previously resident or living at a distance, be appointed to the care of a parish or workhouse, the reasons for such appointment should be transmitted to the Medical Board. No election to be valid unless confirmed by the Medical Board. No medical officer should be liable to any investigation of his official conduct, or to be dismissed from office, except by the Medical Board.

Every medical officer should be permitted to resign at any time, upon giving reasonable notice."

5. The Relieving officer is obviously unable to decide on cases fit or unfit for medical relief.

"We propose, therefore, that the present practice be entirely discontinued, as affording no security to the rate-payers, no safety to the sick paupers, and no justice to the medical officer, and that the following arrangement be substituted:—

Every sick pauper to apply in the first instance to the medical officer, who should be authorized to relieve him at once, if necessary, and, in that case, to furnish him with a certificate stating that the case required treatment. This certificate should be sent by the patient to the relieving officer in a specified time after receiving it—say twenty-four hours. The relieving officer should enquire into the circumstances of the patient (if he be not already receiving relief in money or in kind) before the next meeting of the Board of Guardians, and should make a report thereon at that meeting; and thus enable the Board to divide the patients attended into two classes—the one to which the medical relief should be unconditionally given, and the other to which it should be merely afforded by way of loan, the cost being recoverable according to the provisions of the Poor-Law Amendment Act. The Board of Guardians might, of course, if they thought proper, refuse the continuance of the loan of medical relief to such persons. The cost of the relief thus afforded might be calculated at so much *per diem*, with an additional charge for journeys; and should be distinct from any arrangement for the regular paupers."

At present a Committee of the House of Commons is sitting on this subject. Before that Committee the question will be decided, not by passion, but by reasoning and facts.

Now is the time for actions instead of words! *Medical* evidence has never been considered as the very best in the jury-box, and sincerely do we hope that the witnesses called before the parliamentary committee will store their minds with specific instances that have occurred under their own eyes, and not trust to hear-say evidence which will go for nothing at all—or worse than nothing, because it will prejudice the cause in which they are engaged. The witnesses must recollect that at least four-fifths of the committee are favourable to the principle of the Act, and, to a certain extent prejudiced in favour of its details. Their evidence will therefore be sifted very minutely—and more especially the evidence of those whose positions bring their pecuniary interests in collision with the actual working of the new system. It would, indeed, be of the utmost importance if a number of medical practitioners, quite beyond the pale of suspicion as to private interest, but who have observed the evils of the New Act, were to come forward on the present occasion, to state the results of their observations.

We would say to our professional brethren, be determined, but be cautious. Do not look merely to your own narrow interests, but invoke the eternal principles of justice and humanity.

One word before we quit the subject. Our contemporaries have acted most un-

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wisely in mixing up the general and medical question. They may feel assured that most men of education, of reflection, and of respectability are agreed in the reprobation of the principle of the Old Poor Law, and in the approval of that of the New. The great opposition to the latter has arisen from discontented jobbers, or from persons whose good feelings exceed their good sense. The violent denunciations of our contemporaries have helped to place the profession in both categories.

POISON OF PORK.*

At various times the poison of fish, of sausages, and of pork, has attracted the attention of the profession. Some of our German contemporaries have imagined that the poisonous effects of sausages resulted from the development of a peculiar fatty acid—while those of cheese depended on excess of caseic, and the presence of sebaic acid. But, as the above and other substances prove poisonous to some people, and are innocuous to others, Dr. M'Divett is inclined to suppose that, "in certain states of the digestive organs the articles of food, or some portion of their elements, are converted into poisons by admixture with morbid secretions from the stomach or intestinal canal, or simply by some derangement in the process of digestion." This is an opinion which, of course, admits not, at present, of direct proof. We know that fresh pork is apt to disagree with some people, producing diarrhœa, griping, or vomiting—imitating the action of some of the more violent poisons. Dr. M'Divett alludes to the ludicrous case related by the late Gregory of supposed gout in the stomach, which turned out to be a large mess of pork dislodged by an emetic. But we shall now notice one or two of the examples brought forward by Dr. M'D.

Case 1. A person conceived he had been poisoned by a young woman, whom he accused of this attempt. The belly was swollen—acute pain in the epigastrium—constant vomiting of dark-coloured fluids—burning sensation in the throat—pulse quick and faultering—cold extremities, &c. An emetic was administered, which brought off some lumps of half-digested meat, with immediate relief of the symptoms, and dispersion of the poison. It turned out to be pork that this person had eaten rather too plentifully.

Case 2. A plethoric but hale man was attacked with crampy pains in the stomach, at three in the afternoon, which became of a more violent kind. The skin was covered with cold sweats, the pulse weak and fluttering. He had dined on *pork fry*. An emetic quickly relieved him, and brought up several pieces of fat pork and pig's-liver.

Case 3. Dr. M'D. was called to a middle aged man who had been suddenly attacked with excruciating pain in the region of the duodenum, followed by vomiting of acrid matters. He was apparently in a very dangerous state, with symptoms resembling those of a perforated intestine. It was ascertained that he had eaten roast pork on the preceding day. Half a drachm of ipecacuan produced copious vomiting, by which bile and some bits of half-digested pork were brought up. The medicine operated downwards also, and complete relief was obtained. The family had partaken of the same food, without inconvenience.

Case 4. In January, 1836, a man had dined on pork at two o'clock, and a few hours afterwards was seized with agonizing pain in the ileum, vomiting, &c. On the following morning the pain continued, and the vomiting was urgent, with swollen and tender abdomen, and an urticarious rash over the breast, legs, and arms. An emetic was exhibited, which operated upwards and downwards, with immediate relief.

Two or three other cases are detailed by Dr. M'Divett, followed by some very sensible observations, which are well deserving the attention of the profession.

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* Dr. M'Divett. Ed. Journal, October, 1836.

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EXTRA-LIMITES.

Irish Medical Profession.

At a general meeting of the physicians and surgeons of the province of Munster, lately held in Cork, a very decided and judicious step was taken, and one that, if we mistake not, is likely to be productive of very beneficial consequences—we allude to the appointing of a deputation, consisting of Dr. Nugent of Cork, and Surgeon Phelan of Clonmel, (author of a late work on "the Defects and Abuses of the Medical Charities of Ireland, with Suggestions for a Medical Poor-law,") which was instructed to attend in London, whilst the Irish Poor-law Bill, or any other likely to affect the interests or respectability of their body, should be under the consideration of Parliament. These gentlemen have been some time in London, most actively engaged in pointing out for the consideration of members of Parliament, the urgent necessity there is for making a change in the laws relating to the public medical institutions of Ireland, and the most advisable mode of doing so.

That this subject is a very important one, and that immediate legislation on it is imperatively called for, the following, which will be found a correct statistic on Irish public charities, clearly prove. There are in Ireland about 618 medical charities, supported partly, or entirely, by public funds. They cost, at present, (taking the average of ordinary years, when there are no serious epidemics,) between £170,000. & £180,000. per annum. This fund is supplied by Parliamentary and Treasury grants of £20,000., by county presentments of nearly £90,000., produce of property accumulated, and fines at petty sessions, £25,000.; subscriptions and donations, £40,000.; total, £175,000. a year.

The number of sick, to whom medical aid is annually afforded, by means of these charities, is above one million, viz. interns in infirmaries and from hospitals, 20,000 in the former, and 16,000 in the latter; externs, attended to by dispensaries and infirmaries, *about* 968,000 by the former, and 130,000 by the latter; total, 1,134,000.

We had the pleasure of conversing with Messrs. Nugent and Phelan, and find these to be the views of those who sent them, as well as their own.

They recommend the appointment of a Commission, composed of two medical men, and one non-professional person, (if the Government or Parliament wish it so,) with two or three medical inspectors, to whom the entire management of this great and important mass of institutions is to be solely entrusted. They state, and we think very truly, that such a department should only be in the hands of persons capable of understanding its numerous difficulties and details; and that there are many reasons, in which we also agree, why, in Ireland especially, the relief for the destitute poor, and that for the sick, should not be in the same hands.

We feel very great satisfaction in learning that Mr. Nicholls, who at first was disposed to view the matter differently, now completely concurs with the deputation, and that, after some interviews were had between them, that gentleman, much to his credit, has strongly expressed his accordance with the opinions of Messrs. Nugent and Phelan, who are still in communication with Lord Morpeth and Mr. Nicholls on the subject. We shall only add that, were the medical profession in other parts of the empire to act in the same manner, they would soon find what advantages would result from it. We therefore strongly recommend a similar line of policy to the other provinces in Ireland, as well as to our nearer neighbours, who may well take an example from the profession in that country.

We understand the deputation has given Lord Morpeth the heads of a Bill, but it cannot be made public at present.

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THE EFFICACY OF LOBELIA INFLATA IN INFLAMMATIONS AND CONGESTIONS OF THE MUCOUS LINING OF THE BRONCHIAL TUBES.

To Henry James Johnson, Esq. Lecturer on Anatomy, in the School of Kinnerton Street.

Dear Sir,—I perceive from the Journals that a disease called Epidemic Catarrh or Influenza, is very fatal in London—that it is attended with inflammation of the mucous membrane of the bronchial tubes—bears depletion badly—and that the old and infirm are the greatest sufferers. The experience and observation of a number of years devoted to the practice of medicine, have led me to two important conclusions in regard to the principal diseases of the chest.

1st. That when the serous membranes of the chest are affected, tartar emetic and the lancet are worth all other remedies put together, and those cases which will not bear the lancet, will bear tartar emetic in considerable doses.

2nd. That in those diseases affecting the mucous lining of the bronchial tubes, the lobelia inflata comes as near being a specific as tartar emetic, and the lancet in pneumonia and pleurisy. As a remedy for asthma you are of course acquainted with the virtues of the lobelia inflata. The observation, that it holds a controlling power over inflammations of the mucous membrane of the lungs, has never, I believe, been announced to the medical world, and originated with myself. I always intended to make it known to the public. My notes of the efficacy of this remedy I left in the United States. If I had them, I could give you more definite and precise information in regard to the therapeutic properties of the lobelia in such affections. But I have thought that a bare enumeration of the principle, that lobelia inflata is almost a specific for inflammations and engorgements of the mucous membrane of the bronchi, and for spasmodic constriction of those tubes, might be attended with considerable benefit at the present crisis. I have very little doubt, that if the remedy be tested in your present epidemic, experience will establish the principle beyond cavil or dispute,—*that lobelia inflata is, for inflammations and congestions of the mucous coat of the bronchial tubes, precisely what the lancet and antimonials are for inflammations of the serous membranes of the thoracic viscera.* I have never found venesection, antimonials, or purgatives of much utility in severe catarrhal fevers. Used with moderation, the effects of such remedies are often equivocal, and in excess, always prejudicial. You have, no doubt, observed, that in violent catarrhal fevers, the mucous lining of the alimentary canal sympathizes with the inflammation of the mucous membrane of the lungs. Hurried respiration, red tongue, weak and frequent pulse occuring in catarrhal affections, especially in debilitated children and in old persons, always indicate considerable danger. This is precisely the pathological state of the system, which the lobelia inflata is so well calculated to remove. Its action is so prompt and self-evident, that there can be no mistake about its virtues. It is altogether a different medicine in this state of the system, from what it is when given to a person in health or differently affected. In the healthy state the lobelia is powerfully emetic, but in the inflamed, conjested, or spasmodic state of the bronchial tubes, it neither vomits, nor produces any sensible effect upon the great organs of secretion. It seems to spend its force in diminishing the anhelation, in lessening the frequency of the pulse, in allaying the general febrile commotion, and in restoring the balance of the circulation and excitability. Why it should do so, is as difficult to explain, as why opium is not a narcotic when it has pain or spasm to allay. I use a saturated tincture made of the leaves, stems, and inflated capsules of the plant. Dose—one or two teaspoonsful every two or three hours, oftener, or not so often, according to the urgency of the symptoms. I mix it with about an equal quantity of the syrup of squills, or the oxymel. I have given to children, less than a year old, from 12 to 20 drops, without producing

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vomiting. When the remedy vomits, it indicates that the dose is either too large, or the condition of the system is not applicable to its employment. It produces its best effects when it creates no visible constitutional disturbance. When the anhelation comes on in paroxysms, a dose or two of quinine may be safely and advantageously used in the intermission, and the lobelia in the paroxysms.

Most respectfully, your
Obedient Servant,
SAMUEL A. CARTWRIGHT, M.D.
Of Natchez, Mississippi.

SELECTIONS FROM THE LAWS AND REGULATIONS OF THE BRITISH MEDICAL ASSOCIATION.

OF THE QUALIFICATIONS AND ADMISSION OF MEMBERS.

1.—EVERY legally qualified practitioner in medicine may become a member, on producing to the Secretary satisfactory evidence of qualification.

2.—Every member on his admission after payment of his first contribution, shall be presented with a copy of the laws, and shall sign the following declaration, in a book kept for this purpose, viz.:—

"We, whose names are hereunto subscribed, promise that we will obey the laws and regulations of the British Medical Association, so long as we shall continue members thereof."

3.—If the member admitted should not be able to attend in person, he shall, by letter, authorise the Secretary to sign the declaration on his behalf; and such letter shall be preserved among the papers of the Association.

4.—No person practising any secret mode of treatment, and no proprietor or advertiser of any empirical nostrum, shall become a member of the Association.

OF CONTRIBUTIONS, &c.

1.—Each member shall subscribe annually the sum of £1. 1*s*. Subscriptions to become due on the 1st day of January in each year.

2.—Each member shall, on admission, pay a proportion of the annual subscription,—to be computed from the quarter day nearest such admission.

OF THE OFFICERS AND COUNCIL.

1.—To carry into effect the various important objects of the Association, and to manage its affairs, there shall be elected annually, in September, a Treasurer, three Auditors, and thirty-two Councillors. These, with the chairman of every County Branch Association (who shall, *ex officio*, be a member, if a General Practitioner) shall constitute the Council.

2.—At the first meeting of the Council, after its election, its members shall elect from among themselves, a President, six Vice-Presidents, and a Secretary. All the officers and Councillors shall be, or shall have been, General Practitioners.

SECT. I.—*Of the President and Vice-Presidents.*

1.—The President shall always be a General Practitioner; he shall take the chair at all meetings, when present; and shall regulate the proceedings, preserve order, and enforce the laws of the Association.

2.—He shall state and put all questions at such meetings; and shall have a casting vote only.

3.—He shall also direct the summoning of all extraordinary meetings of the Association or Council; and shall sign the minutes of all meetings, after they have been confirmed.

4.—In the absence of the President, the chair shall be taken by the Vice-President, then present, whose name stands highest in the lists. If all should be absent, then by the Treasurer, by one of the Auditors, or by the senior Councillor present.

SECT. II.—*Of the Treasurer and Auditors the duties are the usual ones.*

SECT. IV.—*Of the Council and its Meetings.*

1.—The Council shall meet on the second Tuesday in every month (excepting in September, and then on the first Tuesday) at 7 o'clock in the evening precisely; and shall have the power of adjournment to any future day or hour. Six members to be a quorum for the transaction of business.

2.—An extraordinary meeting of the Council may at any time be held, by order of the President, provided the Secretary shall have given notice of the time and object of such meeting to all its members residing within the Metropolitan district.

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3.—The Council shall have the power of regulating, until the next general meeting, the duties of any of the Officers, when these are not accurately defined by the laws.

4.—The Council shall regulate all the expenditure of the Association.

5.—The Council shall have a discretionary power to take such steps for the suppression of quackery, and of the illegal and dangerous practice of medicine and surgery by unqualified persons, as the law authorizes, and as may seem to be expedient.

6.—The Council shall also possess a discretionary power to adopt such measures in accordance with the general laws, as it may at any time deem necessary for the preservation and extension of the rights, privileges, and immunities of the Association, and of its members; and for the support of the honour, welfare, and respectability of the medical profession.

7.—The Council shall be empowered to make such bye-laws for the governance of its own body, and of Committees, as it shall from time to time think necessary.

8.—If any member shall be aggrieved by the practice of a person not legally qualified; or by the institution of any unjust prosecution, action, or other legal process against him, he shall send his complaint, with the best evidence he can procure, to the Secretary, who shall submit it to the next meeting of the Council.

9.—The Council shall be empowered to employ legal assistance for the protection of any member of the Association, who may improperly or unjustly be made the subject of prosecution, action, or other legal process; or to adopt such other measures as it may consider expedient.

10.—All questions shall be decided in the Council by a show of hands, or division; and accurate lists of all divisions shall be made, and entered in the minutes.

11.—The proceedings of the Council shall be recorded in a book kept for the purpose by the Secretary; which shall be open to the inspection of the members of the Association, under such regulations as the Council may determine.

SECT. V.—*Of the Secretary nothing unusual.*

OF THE ELECTION OF THE COUNCIL.

1.—Any two members may send to the Secretary, before the ordinary meeting in September, the names of any members residing within the Metropolitan district, whom they may propose as Officers and Councillors, instead of those who are to retire; provided they shall first have obtained their consent to serve, if elected.

2.—These names shall be submitted by the Secretary to the next ordinary meeting; and those of persons eligible shall be published in the medical, and such other, periodicals, as the council may appoint, at least fourteen days before the election.

3.—Every member may vote for any of the names in the published list, and deliver or send them to the Secretary, free of expense, on or before the 27th day of September, in a sealed paper; which, if sent, shall be enclosed in another, having the voter's name written within it.

4.—The President may be re-elected; but shall at no time be permitted to preside more than two years in succession.

OF GENERAL MEETINGS OF THE ASSOCIATION, AND OF ALTERATIONS OF THE LAWS.

1.—There shall be two general meetings in the metropolis, every year; the first on the Monday preceding the 25th day of March, and the second (the anniversary) on the 30th day of September.

2.—The first of these meetings shall be held for making such alterations of, and additions to the laws, as may be considered necessary according to clause 6th of this Chapter, and for the transaction of any business that may be brought before it.

3.—At the second, the result of the ballot for the Council shall be declared; a general report of the state of the Association shall be presented from the Council; and a financial one from the Auditors. Any other business (except alterations of the laws) may be transacted.

OF ORDINARY MEETINGS.

1.—After every monthly meeting of the Council, an ordinary meeting of the Association shall be held at 9 o'clock P.M. for for the admission of new members, and such other business as the Council may direct.

OF BRANCH ASSOCIATIONS AND DISTRICT COMMITTEES.

1.—The Council shall endeavour to promote the formation of Branch Associations, and District Committees, in every county, city, town, and district of sufficient im-

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portance, throughout the Kingdom, beyond the limits of the Metropolis.

2.—Each member of a Branch Association shall be considered a member of the British Medical Association, and shall pay annually, on the first day of January, the sum of £1. 1*s.* to the Treasurer of his branch; one half of which shall be transmitted to the general fund of the Association; the other half shall be retained to defray the necessary expences of the Branch Association: the surplus, if any, to be appropriated annually to the general fund.

3.—No Branch Association or District Committee shall commence any prosecution, or enter upon any proceeding of importance to the general body, without having first obtained the sanction of the Metropolitan Council, or of a general meeting of the Association.

OF THE BENEVOLENT FUND.

1.—A Benevolent Fund shall be established, for the purpose of affording relief to decayed members of the Medical profession, and to their widows and orphans.

2.—Three trustees shall be appointed by a general meeting, to hold the Benevolent Fund in trust for the purpose intended; and all investments shall be made, all securities taken, and all stock purchased in the name of the Trustees for the time being, according to the discretion and under the control of the Council, which shall have the management and disposition of the subject matter of the trusts.

3.—If any Trustee shall become bankrupt or insolvent, or from any other cause become incapable of well and duly performing the duties of the trust, he shall cease to be such Trustee accordingly; and if the Council at any time see cause to remove any Trustee, on the ground that he does not well and truly perform the duties of the said trust, he shall, upon a declaration of the Council to such effect, cease to be a Trustee; and when, from any of the aforesaid causes, or by death or otherwise, the number of Trustees shall be less than three, the Council shall fill up the vacancy, subject to the approbation of the next half-yearly general meeting.

4.—Every order of the Council signed by the Chairman and Treasurer, and countersigned by the Secretary, shall be a sufficient warrant to the Trustees for the time being, for any investment, purchase, sale, or disposition of the stock or monies subscribed for the formation and support of the Benevolent Fund.

5.—No relief shall be afforded to any person from the Benevolent Fund, until it shall amount to £2000., when regulations as to the mode of distributing the interest arising from it, shall be made at a general meeting to be held for that purpose.

Remarks.—Possibly the object of the following few remarks may have ceased to exist before this number of the Journal appears. It is evident that the Association, as it now stands, is designed to be one of GENERAL PRACTITIONERS only, and should have been so designated from the beginning. But a most impolitic, perhaps fatal step has been taken. The Association admits all legally qualified practitioners as *members*; and afterwards prohibits all physicians and surgeons not practising or having practised pharmacy, from becoming *officers* of the institution, or taking any part in its *councils!!* Yet this is the Association which declaims against an analogous course pursued by the College of Surgeons! The step may be retraced, but the mischief is nearly irretrievable. The insult having been offered to physicians and surgeons, they of course, will take no interest in the Institution. The only wise plan open to the Association is to call themselves "The BRITISH ASSOCIATION OF GENERAL PRACTITIONERS"—and only to admit as members the said General Practitioners. By this procedure they give no offence to any class, and they will be acting openly, honestly, and straight-forward. Let them take the "LAW ASSOCIATION" as an example. That association admits only attorneys and solicitors. They do not invite barristers to become members, and prohibit them from taking part in their councils. They do not receive funds from *members*, who are denied a voice in the distribution of them as councillors.

CASE OF IRITIS AND TEMPORARY BLINDNESS, PRODUCED BY TIC DOULOUREUX. By D. JAMISON, M.D.

[*Communicated by Dr. Johnson.*]

W—— D——, a labourer, aged 34, never had rheumatism, gout, or syphilis; and never took mercury, until his eye became diseased. After being subject, for some time, to tic douloureux on the left side of the forehead and face, the eye of that side became inflamed. He

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was afterwards seized with severe pain in the eye, intolerance of light, and almost total loss of vision. In this state he applied for medical advice. He took mercury—was leeched, blistered, &c. without benefit. When the disease had existed about two months, he came under my care. At that time, the conjunctiva was inflamed; there were two or three opaque spots on the cornea,—the iris was changed in color—the pupil had not the shining blackness of the other—its margin was indistinct—and it was immoveable. The sclerotic was not inflamed;—he could do little more than distinguish night from day, with the affected eye—while I was examining him, he had a paroxysm of tic douloureux. The orbicularis palpebrarum contracted spasmodically—tears flowed down the cheek—and the conjunctiva became much redder. I gave him a dose of sulphate of magnesia; then began the use of carb. ferri, in large doses. He took a small quantity of the sulph. mag. every morning, and bathed the eye frequently with an astringent lotion. In a short time, the attacks of tic douloureux became much less frequent, and much less severe. They then departed, and with them the inflammation of the conjunctiva; but the sight was not improved. I now gave him the tincture of iodine. After some time, the iris regained its color—the pupil became dilatable—the specks on the cornea disappeared, and vision was perfectly restored.

RECLAMATIONS.

Every author possesses the undoubted right to protest against the observations of Reviewers. The critic must submit to be criticised, and if he executes his office in a partial, an ignorant, or an overbearing manner, he merits criticism's most indignant lash.

We cannot be accused of refusing to any author ample opportunity for dissenting from our expressed opinions on him. We seldom reply to any reclamation, being content to allow the public to decide, and willing to accord to the aggrieved party the benefit (no slight one) of the last word.

But latterly it has been the fashion for a certain class of people, when their niaiseries are exposed, to turn round on the Reviewer, abuse him like pickpockets, and vent their rage, disappointment, and vulgar vituperation, in one or more of the weekly Journals. This is so contemptible that it would not deserve notice, were it not for the truculent spirit that it fosters, and for its evil consequences on the bearing of professional men.

We have have been led to make this brief observation in consequence of some letters directed against us, which have made their appearance in the Lancet. The writers have conveniently shrouded themselves under fictitious designations, and "Castigator," an "Old Practitioner," &c. have honoured us by their abuse. The execution of these letters is as miserable, as the motives of the writers are malicious. We are denounced as enemies to the General Practitioners. To this we condescend to make but one reply. Our aim is to benefit them and all other classes of our professional brethren, by the dissemination of scientific knowledge, of liberal but not extravagant political principles, and, last not least, of gentlemanly feeling. Such is the *spirit* in which we write, and that spirit will not be judged by insulated expressions nor by garbled sentences.

Another word and we have done. Mr. Wallace, of Dublin, has also honoured us by *his* abuse. Brandishing before a wretched class, a Number of the Medico-Chirurgical Review, he has affected to see in it the signs of dissolution. We shall not throw away our labour by recommending Mr. Wallace to imitate the conduct of a gentleman. But we are quite sure that, to play the mountebank is neither the way to support an argument, nor to rise in the estimation of men of sense.

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OR,

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☞ *The Review of this important work is in type, but unavoidably deferred till next number.*

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☞ *In Exchange.*

NOTICE TO AUTHORS.

Unfortunately our Bibliographical Record was lost about the middle of last Quarter, and several publications are not entered in that which is now published. We request those Authors who have sent us works not entered in the present number of the Journal, to furnish us with the title-pages of the omitted volumes.

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NOTICES TO CORRESPONDENTS.

Several Articles have been postponed.—If C. D. will be kind enough to mention a place to which we may direct a Letter, we shall be most happy to communicate with him.

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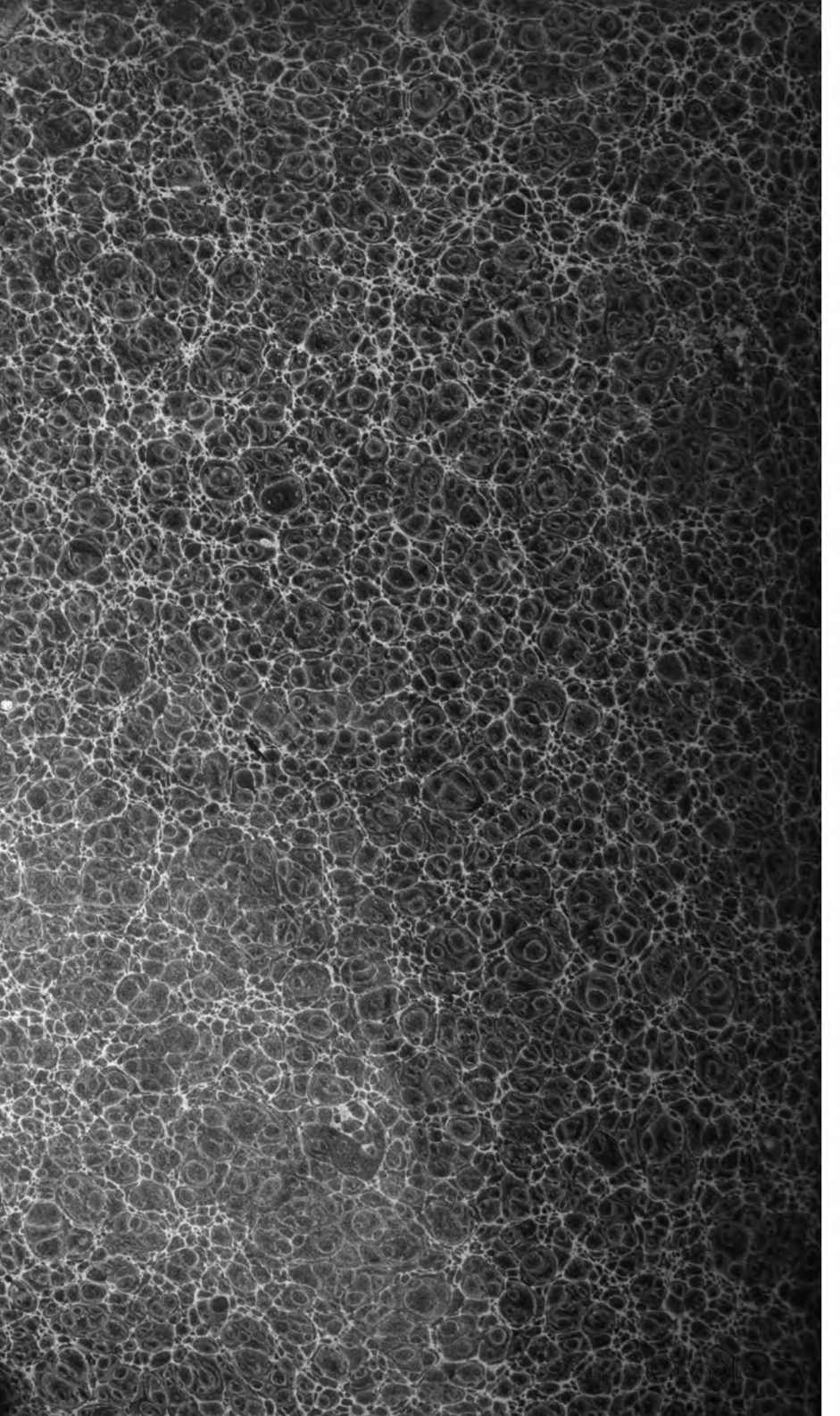

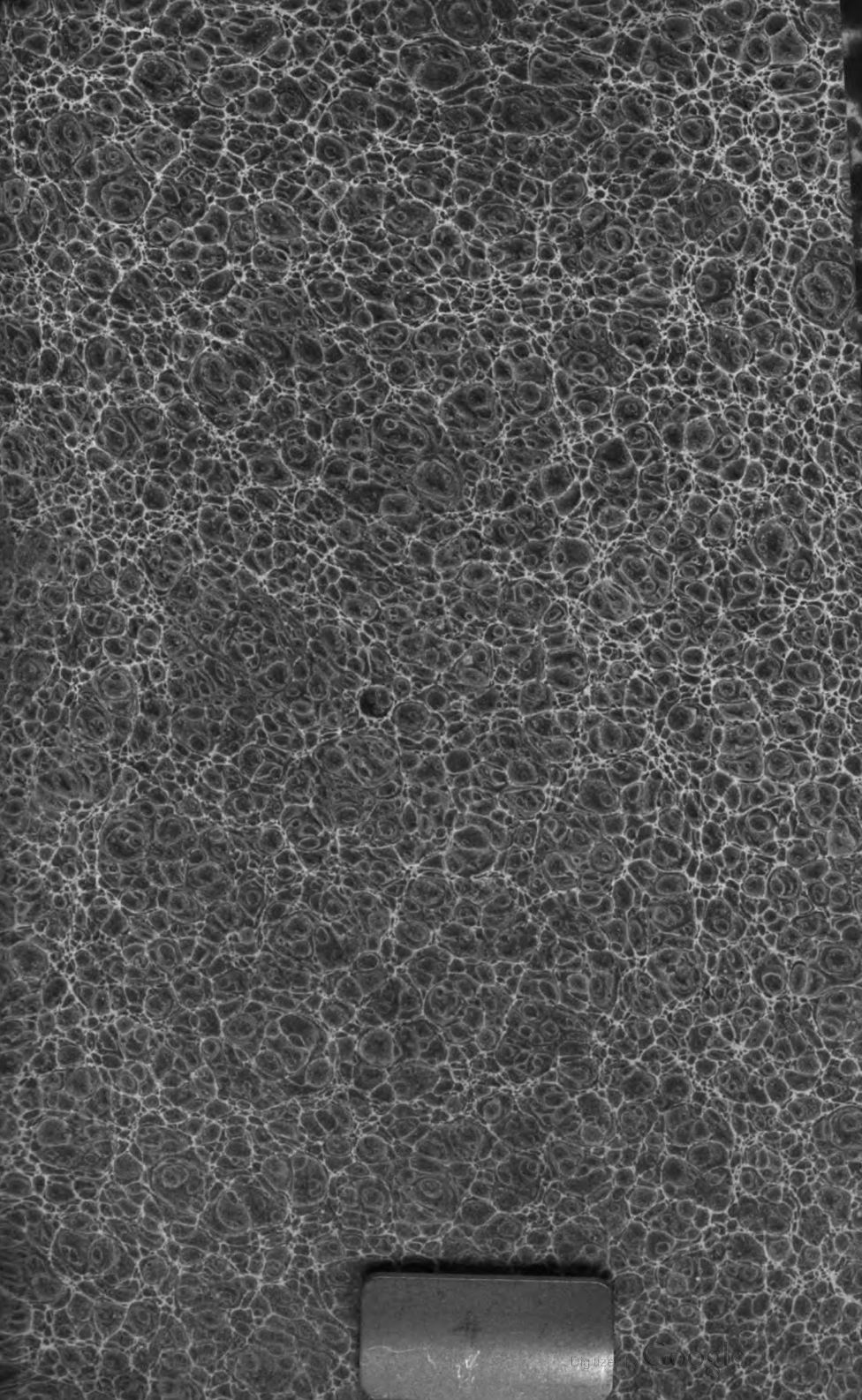
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